

**MONETARY AND ECONOMIC RESEARCH CENTER
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***EUROPE AFTER THE EU
ELECTIONS:
MONETARY AND ECONOMIC
PERSPECTIVES***

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The fifth annual scientific conference of the Monetary and Economic Research Center (MRC) was held from 17th to 18th of October 2019 at the University of National and World Economy (UNWE) in Sofia, Bulgaria.

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Main accent on the 5th Annual Conference was the future of Europe monetary and economic development after the EU elections. Researchers and professionals from more than 7 countries took part.

The present book consists papers in English, French and Bulgarian languages.

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Between globalization and internal stability, the resistible internationalization of the Renminbi¹

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Abstract: China's RMB is becoming a major international currency. It has joined major international currencies and intends to continue its growth although it has not yet become a fully convertible currency. Its share in world trade, reserves remains limited. On the one hand, the increase in its international use is increasing, on the other hand the decline in trade, the accumulation of internal problems - decline in GDP growth, growing domestic debt - are leading the Chinese authorities to push back the opening of the capital account, to control interest rates. Social stability has become a priority.

Key words: RMB, China, Convertibility, capital account

JEL codes: E F G

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1. Introduction

For more than two decades, we have witnessed the rise of China. It now accounts for 15% of global GDP, almost 12% of world trade. By pursuing an international strategy that some people call expansionist, it weaves its web around the world, around it, in Eurasia, in Africa, on the margins of Europe, but also in Latin America. The commercial and financial flows induced by this strategy are still denominated in dollars. China, following its commercial successes, to its overseas operations intends to promote the use of its currency, the Renminbi, both as commercial, investment and reserve currency.

Which goals does China pursue by pushing the internationalization of its currency?

Two objectives can be envisaged:

- contribute to the architecture of a new global financial system in which a pool of reserve currencies, including the Chinese Yuan, predominate, or
- develop a Sino-based international financial system that competes with or operates in parallel with the international monetary system with the aim, among other things, of weakening the dollar (and the Euro?)

Recently the economic context has changed with the return of protectionism that disrupts global trade flows, the "trade war" against China accused of forced transfers of technology, non-compliance with the law, intellectual property theft, dumping practices. US measures (drastic increase in tariffs, control of Chinese investments, prohibition of the sale of sensitive technologies) hinder trade, affect international value chains, impact capital movements.

Another important factor is related to the decline in economic growth in China (Figure 1) and the increase in the ratio of indebtedness / GDP to almost 300% today.

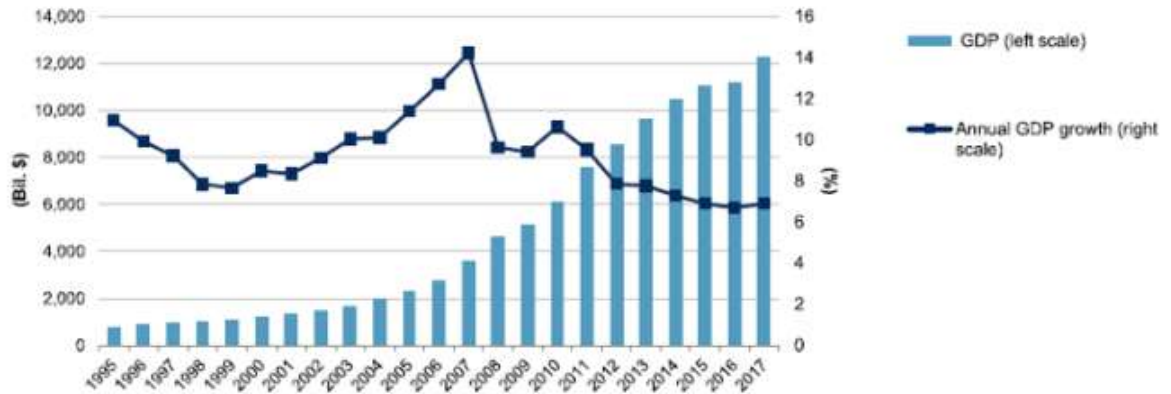
Chinese officials are today balancing two conflicting goals: pursue a strategy that promotes trade and investment and international expansion of the RMB and engage in the adoption of economic policies to revive activity, stabilize the economy at the cost of greater debt.

2. RMB, the coming currency

With China's increasing economic weight in recent decades (GDP, trade, capital flows), the role of the Chinese Yuan, the Renminbi (RMB), occupies and is expected to occupy a position in the future. growing in size worldwide. Its place is still limited in comparison with the two dominant currencies (\$, €) and the others (£, Yen) which count in world trade as well as in official foreign exchange reserves (IMF, Central Banks). In 2016, a sign of its growing place, the RMB has been officially integrated into the basket of currencies that make up the IMF's artificial currency Special Drawing Rights. In recent years, the Chinese authorities, along with many national central banks, have established swap centers in different parts of the world. Many Chinese investments outside the country are now denominated in RMB, notably through the *Belt and Road Initiative* project launched by President Xi Jinping in 2013. Previously, Hong Kong became the first financial

center to issue bonds denominated in RMB outside China (*Dim sum* bonds) followed by other financial markets, particularly in Asia and Europe.

Figure 1: Chinese GDP growth rate



Source : World Bank

However, the Chinese and international domestic financial markets on which Chinese and foreign institutions operate (companies, banks) remain compartmentalized. At the domestic level the capital account is only partially released, interest rates remain administered, and the exchange rate is also heavily regulated despite the adoption and widening of bands of fluctuation. The development of an off-shore RMB market is gradually developing, but its links with the domestic market are through complicated and highly controlled channels in order to avoid excessive differences between the different markets. The exchange rate remains partly linked to major currencies, particularly the dollar, even if the pegging incorporates, by weighting them, other currencies of countries with which China exchanges.

The internationalization of the RMB, its recognition as an international reserve currency is an objective of the Chinese authorities even if the current environment seems less favorable. First of all, there is a significant gap between the growth in trade volume, capital movements and their settlement, which are still mainly denominated in dollar, including transactions carried out at the domestic level (investment, exports).

Can the internationalization of the RMB continue to grow, its exchange rate become more flexible, evolve into wider bands, or even float? We are not there yet. Several factors are holding back the growth of the internationalization of the RMB and its role as a reserve currency. At the international level, we can cite the hegemony of the dollar and the privileges that are associated with its role, the uncertainties regarding international trade following protectionist measures, the "commercial war" initiated by the United States against of China, the resulting contraction of trade. At the domestic level, the decline in Chinese growth officially stands at 6.2% (it would actually be less than 3as its level is politically decreed (Pettis 2019), the growth of debt fueled

by central government, provinces, non-financial enterprises, financial institutions, etc. which now stands at more than 300% of GDP (the largest share going to non-financial firms), the very low level current account (0.5% of GDP). China uses policies to support economic activity through the adoption of favorable credit policies, the lowering of reserve requirements for small banks, the issuance of bonds by the provinces, the distribution of subsidies to businesses (favoring the state sector) increases the financial debt and does not contribute to reduce the opacity of the financial system of the country whose reform is regularly mentioned by the Chinese authorities but which may prove difficult to implement.

3. The advantages of a reserve currency for China

Why internationalize the RMB and make it a reserve currency?

It is for China the recognition of the place in the world economy acquired during the last decades. China, in addition, can reap significant benefits in terms of the cost of financing. It is also a way to reduce the advantage that the United States derives from the hegemony of the dollar, to participate in a pool of currencies whose transaction costs would be minimized. The use of RMB for Chinese exporters and importers would help reduce the exchange rate risks they face.

Box 1: What is an international currency?

An international currency is a currency that is held and used outside the currency area where it is issued, including by non-residents. International currencies must fulfill three functions: (i) be a unit of account, (ii) a store of value and (iii) a medium of exchange within and outside the currency area where it is issued. In particular, an international currency must be used both for official purposes (foreign exchange reserves denominated in the currency, use of the currency for foreign exchange interventions and as anchoring for other currencies) and private (invoicing of trade, denomination of financial products, private investment).

There are several factors that promote the international character of a currency:

- the economic size of the country issuing the currency, its role in world trade and the volume of its financial markets;
- the financial, economic and political stability of the currency area where the currency is issued and the ability of the monetary authority to achieve its price stability objectives;
- the liquidity and depth of the financial markets so that the volume of transactions is sufficient for each of them to have a low impact on prices;
- convertibility for current and financial operations, with a removed degree of capital account openness.

Source: Trésor-Eco (2013)

It also reduces the exposure of the Chinese marketable securities sector to changes in the dollar value, especially in the event of a fall in the dollar supply. Finally, the internationalization of the RMB allows Chinese domestic operators to borrow local currency in different markets.

The Chinese currency fulfills the four attributes (Figure 2), both private and public, of a convertible currency as defined by McKennon, but with different intensities in its different functions. The RMB is still unattractive despite its strong growth in recent years. Most of the

world's non-performing economies remain tied to the dollar. In 2015, 62% of countries in have their currency indexed to the US \$, 60% of developing countries borrow in this currency; 30% of countries have their currency indexed to the €. Central banks, on the other hand, hold more than 60% of their currency reserves in US \$.

The RMB has quickly become a reference currency (IMF), restrictions on its use in trade, in international investment are gradually lifted. The RMB is now a commercial currency (RMB trade value). RMB-denominated trade rose sharply from 2% in 2010 to more than 15% from 2015, mainly in trade with developing countries. Regarding the investment currency aspect, the launch of the RMB offshore market in Hong Kong in 2010 was an accelerator with the appearance of a variety of products: *dim sum* bonds, investment bonds, equity products, exchange traded-funds, currency derivatives. At the same time, the Chinese monetary authorities have put in place an elaborate mechanism and specific institutions to circumvent unification and confrontation in a real offshore and onshore supply and demand markets through the establishment of the Qualified Foreign Institutional Investor program. At the same time, the Chinese authorities have gradually expanded the use of RMB as commercial and investment currency for Chinese exports and non-commodity imports. In the BRICS alliance, the creation of the *New Development Bank*, which has a majority of Chinese capital, is a means of increasing the use of the RMB by granting loans denominated in the Chinese currency. The ambitious *Belt and Road Initiative*, launched in 2013 by the Chinese president, is also an important vehicle for expanding the use of RMB globally.

The most important function, on which the Chinese authorities are very circumspect today, is the RMB's reserve currency dimension. The total convertibility of the RMB, announced several times, is no longer on the agenda even if progress has been achieved. Several central banks have purchased still modest amounts of RMB, but to become a global reserve currency, the RMB should be accepted internationally for investment, financing, payment, and as reserve currency. To date, we are still far from the level of liquidity and depth of the RMB market to reduce transaction costs. We are still far from the opening of the capital account needed to unify the foreign and domestic markets of the Chinese currency.

Specialists (Eichengreen, 2017) recall the historical experience of domination, cohabitation and then expansion of the dollar against the British pound. Whereas the United States had become the world's leading economic power since 1870, the pound remained the reference currency for several decades thanks to the network effect of the pound (the international reference currency). It is the opening of the US domestic market that facilitates the international growth of the \$ market. For these specialists, the cohabitation of several convertible currencies is possible, as the cohabitation of the \$ and the € shows today. A system with several dominant currencies would be more stable with several issuers sharing the burden of generating safe and liquid assets in times of crisis (Smart, 2018).

Figure 2: The RMB and the 4 key attributes of a convertible currency according to McKinnon

Private	Official
1. Medium of exchange (immediate payment/settlement)	
International payment Trade settlement FDI and ODI	Bilateral currency swap
2. Store and value (Banking and research)	

RMB assets held by overseas institutions within China Quotas RMB's turnover in FX market	IMF COFER9
3. Unit of account (Invoice and peg)	
Trade invoice in RMB	Special Drawing Rights valuation
4. Standard of deferred payment	
Private bonds	Sovereign bonds

Source: Natixis (2018)

4. The slow internationalization of the RMB

Following the reforms introduced since the 1980s, the opening of China has led to a strong growth of its foreign trade. The export-led growth model has unfolded in different stages (Box 2) involving different accumulation patterns, on the one hand, and foreign exchange rate, on the other.

China's monetary policy remained unchanged between the years 1991 and 2005. The exchange rate remained pegged to the US \$ at the rate of 8.18 RMB to the dollar; a wider daily fluctuation band was introduced followed by a revaluation of the Chinese currency. At the same time, attempts to open up the capital account were undertaken through the establishment of channels between the Chinese financial centers and the Hong Kong financial center by creating the first offshore RMB market. The Chinese authorities have continued to promote the use of RMB for Chinese merchandise exports and non-commodity imports. China has swap agreements with many financial markets including developed countries. Several European financial centers have become RMB bond issue centers. Finally, several central banks (including those of Great Britain, France, Italy) now include the Chinese currency among their foreign exchange reserves.

Box 2: China's neo-mercantilist growth model

Basic accumulation model 1980-2001	Upset accumulation model 2002-2008	Towards a more exposed accumulation model? 2008-
Low wages, abundant labor,	Rising wages and social expenditures.	Wages up, tension in the labor market, wage growth, robotization Greater social protection. Increase in wages > increase in productivity
Mass production of low value-added goods	Production of higher value-added goods, assembly of imported inputs.	Production of higher value-added goods incorporating domestic input benefits, integration into international value chains, internationalization of Chinese firms through the acquisition of

	<p>Role of incoming IDEs in the upmarket. Transfer (often forced) of technology</p> <p>Relocation of low VA and intensive low-skilled productions (Cambodia, Vietnam)</p>	<p>assets in advanced economies (market research, technology). Securing supplies of raw materials (Asia)</p>
Soft fiscal constraint (political financing),	Soft budget constraint (political financing) but appreciation of the RMB; Expansionary fiscal and monetary policy after 2008	Soft fiscal constraint (political financing), distortions in access to finance between state and non-state firms. Maintaining strong subsidies to state investments
Excess balance of payments	Excess balance of payments	Excess balance of payments but current account close to zero
Numerous barriers to entry (prior to WTO accession)	<p>Reducing barriers to entry, maintaining barriers in strategic sectors (finance)</p> <p>WTO Membership, Inbound FDI inflows</p>	<p>Supply Policy: Modernization of Firms, Regulatory Change, but Support to State Firms</p> <p>Demand policy: stronger competition in mature markets, refocusing on the domestic market. End of growth model driven by exports; increasing role of investment-led growth policies</p>

On November 30, 2015, the IMF granted the Chinese currency the status of reserve currency; On October 1, 2016 the RMB joined the €, ¥, £ and US \$ in the basket of currencies that make up the Special Drawing Rights (SDRs). To date, the RMB's share is still very small by relative to the major reserve currencies (Figure 4) in relation to the dominant currencies, the dollar and the euro.

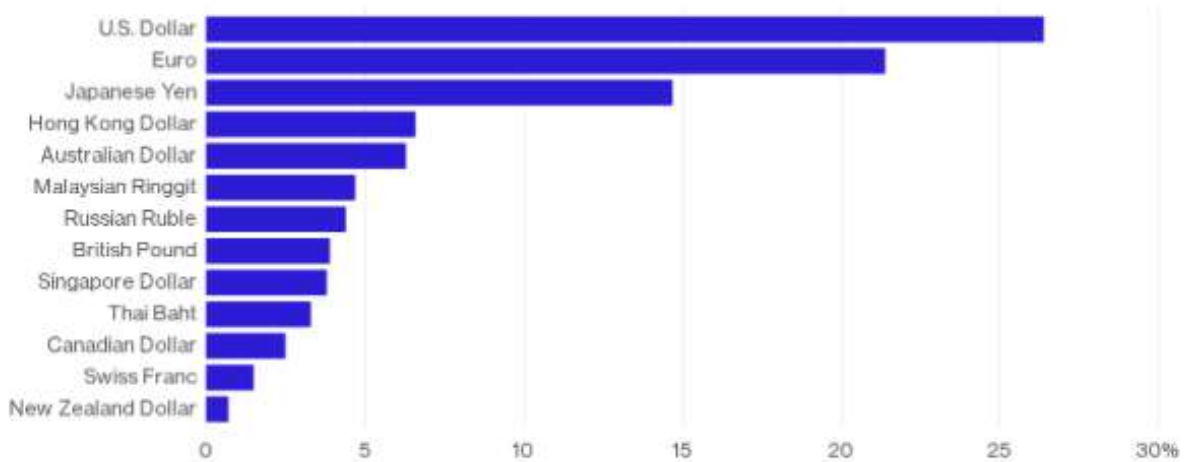
The creation of new banks with significant Chinese holdings in Asia (Asian Infrastructure Investment Bank) as well as in the context of BRICS (New Development Bank) is an important lever to promote the use of the RMB and to avoid resorting to the US dollar. The ambitious BRI project initiated and driven by China is also a way to promote the international use of the Chinese currency.

5. A dirty float? From pegging to managed floating

The exchange rate of the RMB remains closely monitored. The current system is a BBC (Band, Basket, Crawling) floating type. It is determined by a range of fluctuation (Band) which is

widening more and more: it has gone from more at least 0,5% in 2007, to plus or minus 1% in 2012 to establish since 2014 in a range of plus or minus 2%. At the same time the currency is pegged to a basket of currencies (Basket), composed of more than twenty currencies but which is strongly influenced by the main currencies of the countries with which China trades: \$, € and Japanese Yen (Figure 3). Finally, depending on the tension in the currency markets, monetary authorities may resort to incremental adjustments (Crawling).

Figure 3: Currency Weightings in China Foreign Exchange Trade System (CFETS) RMB Index



Source: Bloomberg

6. Arbitration between internationalization and deleveraging: a brake on the internationalization of the RMB

In the early 2010s, the most optimistic analysts announced that the convertibility of the Chinese Yuan would occur during this decade. Despite efforts to both support its internationalization and reduce the control of the capital account, the RMB still remains a relatively small currency at the international level (Figure 4) both in trade, reserves, financing of economy.

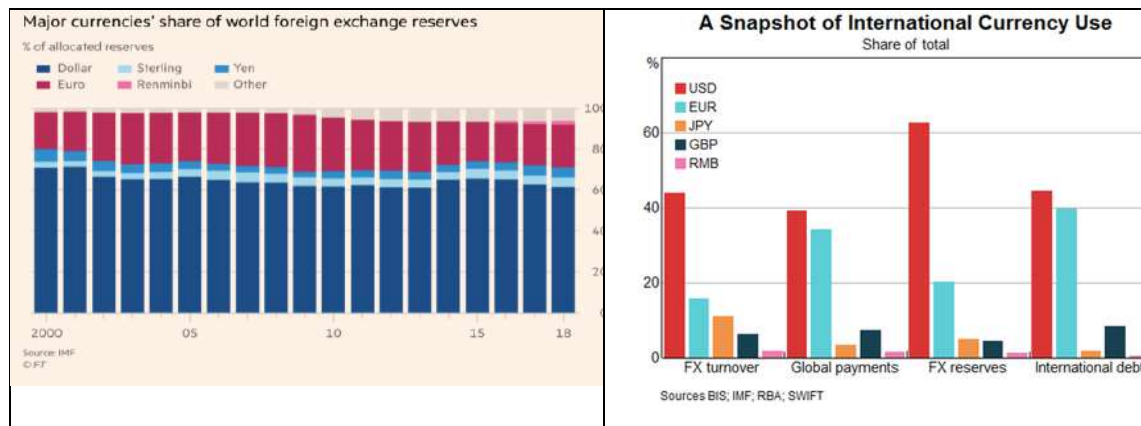
The change in economic conditions (decline in activity, impact of the trade war and domestic structural constraints (increasing debt, default risk of financial institutions) have a direct impact on the internationalization of the RMB whose depreciation has recently accelerated.

Several factors are behind this reversal (Steil & Smith 2017):

During the period 2005-2013, the RMB appreciated by 36.7% against the \$. Since it has lost more than 11% of its value despite support from the Chinese Central Bank (PBoC) to support the currency, pushing investors to abandon the currency.

The fall in the RMB reflects the slowdown in Chinese growth driven by debt and the accumulation of default risks despite the policies of stabilizing the level of non-performing loans (NPLs) in the Chinese banking sector. These bad debts reached \$ 220 bn in 2016

Figure 4: Share of reserve currencies (in%)



Source: FT, UniCredit

In order to control decline of the RMB exchange rate, the Chinese authorities limited, in 2017, the conversion of the RMB into dollars, in particular by reducing the possibilities of acquiring firms abroad to curb the capital outflows of the companies, making the repatriation of capital more difficult for foreign investors. Short-term economic stability outweighs exchange rate flexibility.

A third factor that helps explain the weakness of the RMB is that China has exhausted its export potential. The export volume of more than 15% in 2015 is beginning to decline.

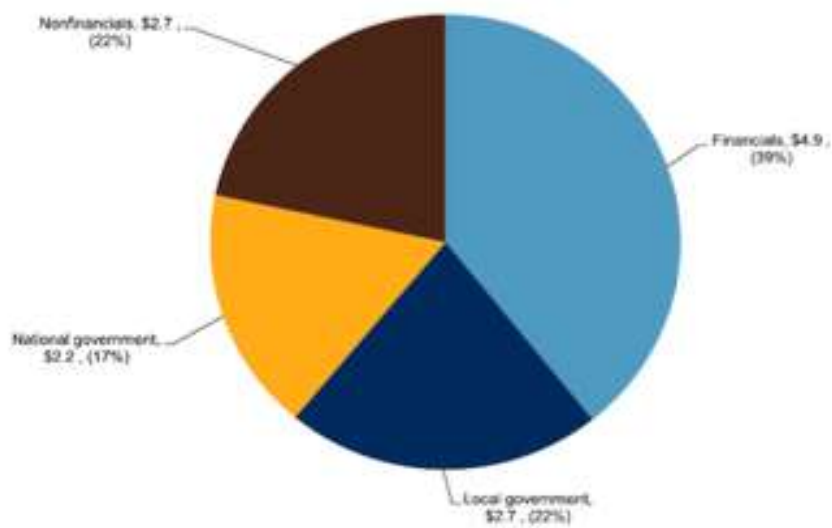
The fourth explanatory factor is the contraction of globalization (Richet & Vercueil, 2019). Capital flows in the form of purchases of shares, bonds, direct investments, loans decreased by 2/3 from 11.9 trillion to 3.3 trillion \$ between 2005 and 2015. Protectionists measures implemented here and there lead to raising customs barriers. Merchandise trade is also declining, shrinking by 10% between 2011 and 2015. China is losing market share in a declining global market.

These factors have a strong impact on the future of the RMB, its international role, especially as a reserve currency that today represents only 1% of the world's reserves.

Today, the priority for the Chinese government is to support economic activity in order to boost growth on the one hand, to tackle deleveraging, the two objectives may be contradictory (Xu Bei 2018). At the same time, the government must fundamentally restructure the banking system

today in great difficulty, and even for some (Pettis, 2019) in bankruptcy. The recovery of the economy in China is generally based on the adoption of Keynesian policies by supporting infrastructure financing providing limited returns, pushing the duplication of businesses without prospects for future profitability, by opening up the credits widely, especially to state-owned firms. This soft budget constraint leads to increased indebtedness and misallocation of resources. Deleveraging itself produces (or should produce) an opposite effect by theoretically making the budget constraint harder (credit squeeze, higher reserve requirements, higher interest rates). However, it is not the case. Financial repression means that the state can continue to finance unprofitable investments by drawing on available savings, including household savings. The risk for China is the possibility of entering a long period of stagnation of its growth

Figure 5: Current Chinese Debt Distribution (in Tril \$)



Source: S&P

The objective of economic stability (in fact social stability) will mobilize the efforts of the Chinese leaders to the detriment of the objectives of internationalization which remains a prerogative. The strategy around the BRI project aims precisely to rely on it to continue to develop the dimension of exchange and investment currency, notably by finding outlets for Chinese companies with overcapacity (Richet 2019) thanks to loans repayable by borrowing countries. receivers of investments. This strategy is not without risk (see the losses recorded in Venezuela which amount to \$ 23 bns).

The fact remains that the internationalization of the RMB is based on a strong growth of the Chinese economy, the only condition for permanently establishing the Chinese currency as a reserve currency. In China, opinions differ on how to achieve or approach total convertibility (Otero-Iglesias, 2018). A first current suggests the opening of the economy, the end of the monopoly of state enterprises, the profound restructuring of the banking system; the strengthening of the RMB's position in the Asian region (like the € in Europe). Another, more "illiberal" approach is also considered, less market-oriented, as long as the country maintains other key

determinants for internationalization such as a large economy and stable macroeconomic framework and enhanced network externalities.

7. Conclusion

The internationalization of the RMB is proving harder than expected despite the promising start of the Chinese government's efforts. To date, it represents only 1% of world reserves. Growth as a currency of exchange and investment continues. The measures taken by the Chinese government to protect themselves from speculative capital movements, curbing the capital outflow of Chinese firms have had a negative impact on the appreciation of the RMB. Economic stabilization (revive growth without increasing debt) and financial (restructure the financial system, reduce the risk of default) now outweigh the goal of internationalization of the RMB.

What futures for the Chinese currency?

Abandon the internationalization of the RMB and withdraw from the international money market? This does not seem conceivable because of the importance of China and the project of its leaders to increase its power at the international level.

To develop its financial market, to transform itself into a market economy, to liberalize the exchange system by opening the capital account. This scenario is not on the agenda in the immediate future. It would imply that important structural and institutional measures are taken for restructuring the financial system, end of financial repression, unification of domestic financial and monetary markets with international markets.

It remains the perpetuation of the current status quo, keeping the domestic market in the hands of the State, on the one hand, with the structural imbalances that characterizes it and on the other continuing to expand the RMB as a trade and investment currency. Eventually, the authorities could seek to drive a wedge into the hegemony of the dollar by creating financial instruments (derivative in raw material).

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Evaluation of members' satisfaction in modern Bulgarian agricultural cooperatives¹

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Abstract: *Decades after the establishment of the first modern agricultural cooperative in Bulgaria, we observe a continuous increase in its number, then we see a decline until nowadays. We have identified three historical periods for this development: pre-socialism, socialism and post-socialism. In periods, when the members' satisfaction is higher, we notice an increase of the cooperatives' number and vice versa. In each period the relation between members' satisfaction, cooperative values and principles, on the one hand, and existing and operating governance structures, on the other hand, differs seriously.*

This paper is concentrated on reasons for this development and tries to evaluate the influence and application of the governance structure and cooperative values and principles on members' satisfaction. In our research we argue that the members' satisfaction is higher when the governance structure of the cooperative fits with the cooperative values and principles.

¹ This research is conducted within the project "Innovation Models for Farms Competitiveness Increase in Bulgaria" financial grant from Nacional Science Fund, Ministry of Education and Science, contract № ДН 15/11 from 18.12.2017

The methodology of the research comprises qualitative and quantitative methods. The qualitative method includes in depth interviews, observations and narrative analysis. We use Analytic Hierarchy Process (AHP) as an instrument for quantitative valuation of governance structures, according to the cooperative values and principles as a criterion, and will use it to measure the members' satisfaction in each historical period.

Key words: *agricultural cooperatives, cooperative values and principles, governance structure, members' satisfaction.*

JEL codes: *Q13*

1. Introduction:

Despite the deep historical roots of the Bulgarian modern agricultural cooperatives and some decades of a continuous increase in their number, we observe a decline until nowadays. We identify three historical periods for this development: pre socialism, socialism and post socialism. In periods, when the members' satisfaction is higher, we notice an increasing number of cooperatives and vice versa. In each period the relation between members' satisfaction, cooperative values and principles and existing and operating governance structures differs seriously.

The aim of this paper is to evaluate the impact and the application of cooperative values and principles on members' satisfaction as a main reason for the observed decrease of the number of cooperatives (Figure 3).

The research proceeds from the assumption that the satisfaction of cooperative members is closely related to the practical application of the cooperative values and principles. If the cooperative values and principles are accurately followed, then the members' satisfaction increases and the cooperative enterprise is more sustainable. When some cooperative values and principles are not applied, the members are not satisfied and that can explain the decrease in the number of members and cooperatives over time.

Historically, the cooperative development in Bulgaria can be divided into three periods:

- First period (pre-socialism) - from the establishment of the first cooperative in 1890 to 1944;
- Second period (socialist) - from 1945 to 1989;
- Third period (post- socialism) - since 1990.

In our previous studies we have found (Boevsky, I., 2007; Sarov, A., Boevsky, I., 2016a, b; Sarov, A., Boevsky, I., 2017) some strong relations between members' satisfaction and cooperative values and principles and their reflection in the cooperative governance structure. On this basis, we claim that members' satisfaction is higher when the cooperative governance structure corresponds to cooperative values and principles.

For each of the periods we will construct a hypothesis that we will try to measure and prove in the empirical part of the study.

H1: The pre- socialist period applies the cooperative values and principles to the greatest extent. Because of that, the members' satisfaction is high and the cooperatives are developing positively and the member is in the focus of the cooperative governance structure.

H2: The socialist period is characterized by values and principles that lead to compulsory membership and centralized cooperative governance structure, which focuses on the needs of communist party and communist government. Thus, the member got only the role of endorsing the decisions of the communist party and its government which is why the members' satisfaction went to the lowest level. This is one of the reasons, why members abominate this type of organization, which also reflects on the negative image of the cooperative in the post-socialist period.

H3: The post- socialist period practically applies in low degree the values and principles (even though they exist on paper and are presented in the cooperative governance structure and try to change the focus formally on the member, but informally, the focus is on the chairman and his management team), which is why the members are not satisfied and their number decreases as the number of cooperatives.

We use Analytic Hierarchy Process (AHP) as an instrument for quantitative valuation of the cooperative values and principles and will use it to measure member's satisfaction in each historical period.

Our paper is structured as follows. First, we begin with description of the periods and values and principles that are followed. Second, we describe the methodology and apply the AHP method to measure the members' satisfaction. Finally, we discuss the results and make conclusions.

Barton (1989) distinguishes the cooperative values and principles between four classes of principles: Rochdale, Traditional, Proportional, and Contemporary. Based on Barton's classification we assume that the Bulgarian cooperatives use the following values and principles:

- Pre-socialism period – combination of Rochdale principles with the values and principles from Friedrich Raiffeisen and Wilhelm Haas;
- Socialism - "socialist" principles;
- Post-socialism - Traditional principles.

2. First period. Pre- Socialism - from the establishment of the first cooperative in 1890 to 1944

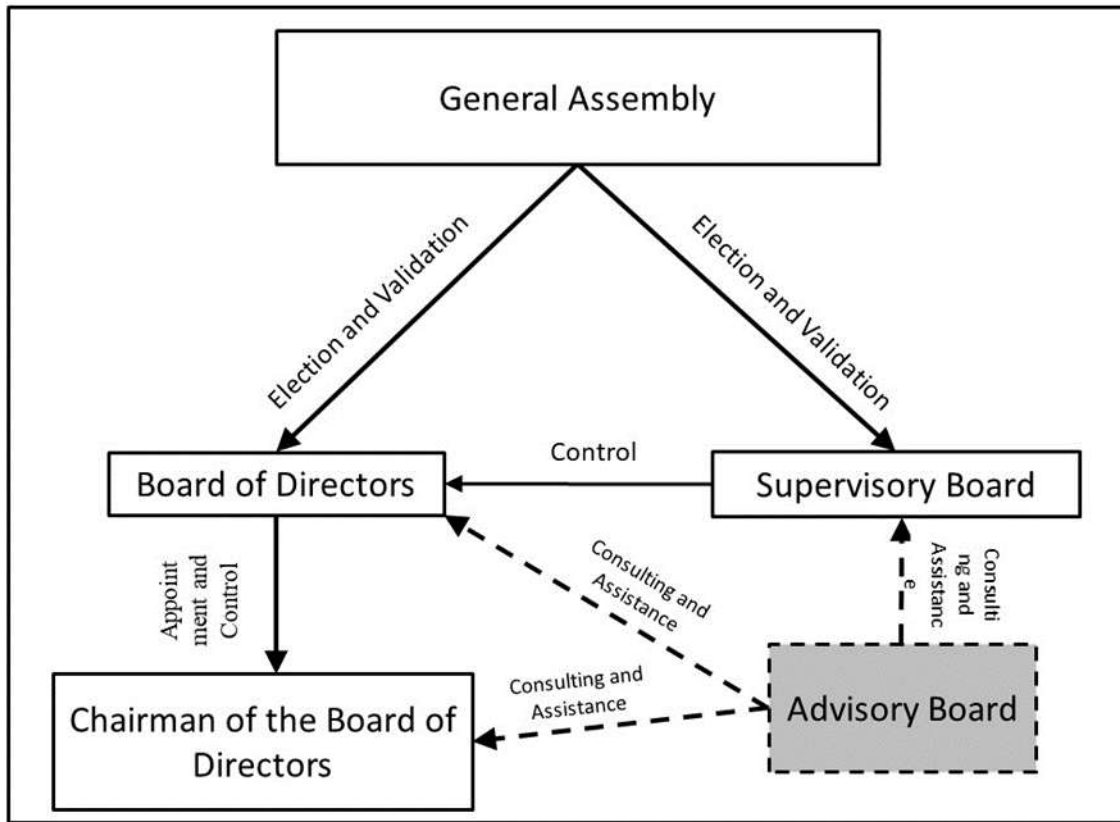
The first modern agriculture cooperative in Bulgaria was established in 1890 in the village of Mirkovo. In Bulgaria, unlike Western European countries, cooperatives are established in the villages. Since its beginning, the cooperatives have emerged to meet the needs of their members and operate as full-purpose cooperative (incorporating both financial and non-financial products and services into their business operations). The

initiators for the cooperative establishment are not the common people, these are the educated people. Leading role is played by the village mayor, the teacher, the priest. Remarkable was the influence of the German cooperative system on the Bulgarian cooperative law and Bulgarian cooperative development. In fact, Bulgarian cooperatives follow a combination of Rochdale principles with the values and principles from Friedrich Raiffeisen and Wilhelm Haas, which are summarized below:

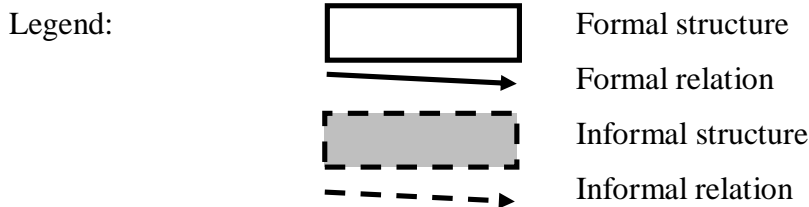
1. Self-help,
2. Self-responsibility,
3. Self-management,
4. Volunteer management (without payment),
5. Democracy,
6. Equality,
7. Equity,
8. Solidarity,
9. Decentralization,
10. Independence from the state,
11. Political and religious neutrality,
12. Economization,
13. Voting is by members on democratic basis (one-member-one-vote);
14. Membership is open;
15. Equity is provided by patrons;
16. Equity ownership is share of individual patrons is limited;
17. Net income is distributed to patrons as patronage refunds on a cost basis;
18. Dividend on equity capital is limited;
19. Exchange of good and services at market prices.

These values and principles underpin the first Bulgarian cooperative law as well as the internal and external cooperative governance structure. The member is in the focus of the internal and external governance structure (see the left side of figure 2) and it is build down-up. The decisions comes and are made from the owner-members in the general assembly or from their representatives in the other governing bodies in their favor, usually without agency problems (Figure 1). For consulting and assistance of one, more or all operative cooperative governing bodies, the owner-members establish an advisory board as an informal element of the internal governance structure. Usually, members of the advisory board are educated people from the village that do this job voluntary.

Figure 1. Extended innovative cooperative internal governance structure



Source: own figure



With their successful implementation of the values and principles and their operations, the cooperatives gained the trust and the satisfaction of their owner-members. In 1944 the number of the agricultural cooperative is 2,160 with around 2,000,000 members. These numbers show that every rural Bulgarian household is a member of minimum one cooperative.

3. Second Period. Socialism - from 1945 to 1989

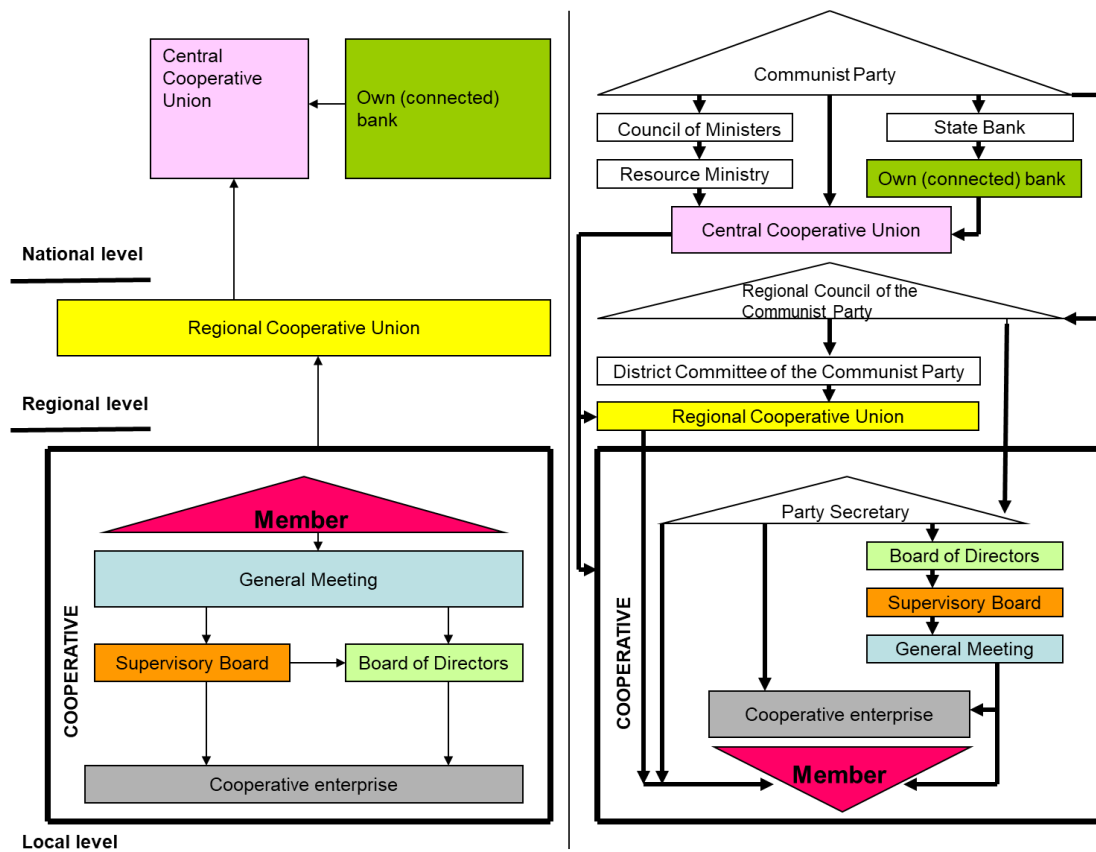
During this period the cooperatives are restructured in TKZS. Based on the cooperative theory of Marks and Lenin, the restructuring is applied compulsory and violently. Compulsion, pressure, violence and centralism become the main values underpinning the communist cooperative law and corresponding government structure (see the right side of figure 2).

While in the pre-socialist period, the member-owner (in red) is in the focus of the activity of the cooperative and its governance structures, in the socialist cooperative and its governance structure, the focus is changed and is no longer on the individual member. It is on the communist party and on the communist state. The governance structure is reordered from down-up to top-down. We identify the following values and principles:

1. Compulsory membership
2. State-sponsored and state-controlled
3. Authoritarian management
4. Party Dependence
5. Party Control
6. Equity ownership is share of state
7. Concern for Party
8. Net income is distributed to state
9. The benefits are for the state
10. Nationalized private property

The autonomy of the cooperative is lost, whereby the governing bodies of the communist party-and the communist state only dispose of the land and the distribution of income. Another important feature is the members' placement at the bottom of the governance structure, i.e. their voice is no longer needed, they are practically not included in the cooperative governance. They are instrumentalised and only used as the labour resource of the production unit as well as entity for affirmation of the communist party's decisions. The function of the General Assembly has been completely seized by the party secretary as an executive of the communist party and communist state. Thus, the cooperative governance structure is practically merged with the communist party and communist state.

Figure 2. A comparison between pre socialism and socialist cooperative governance structure.

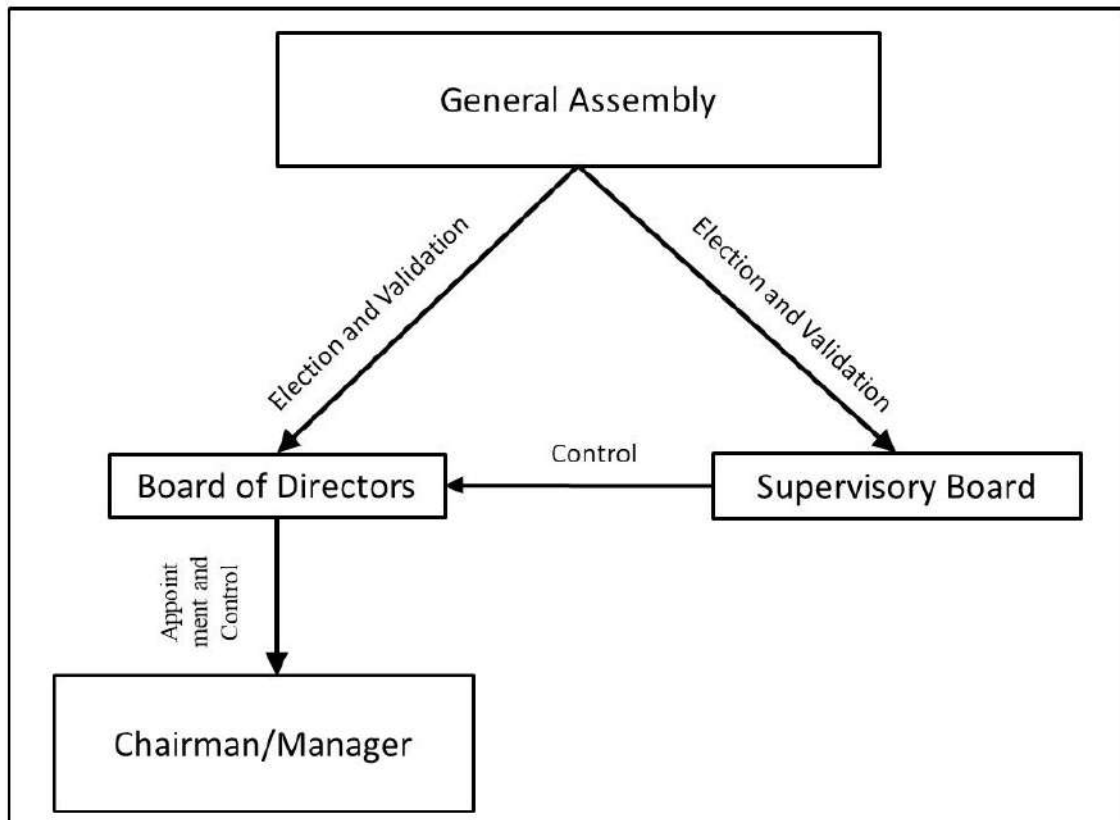


Source: Boevsky, Laurinkari. (2017).

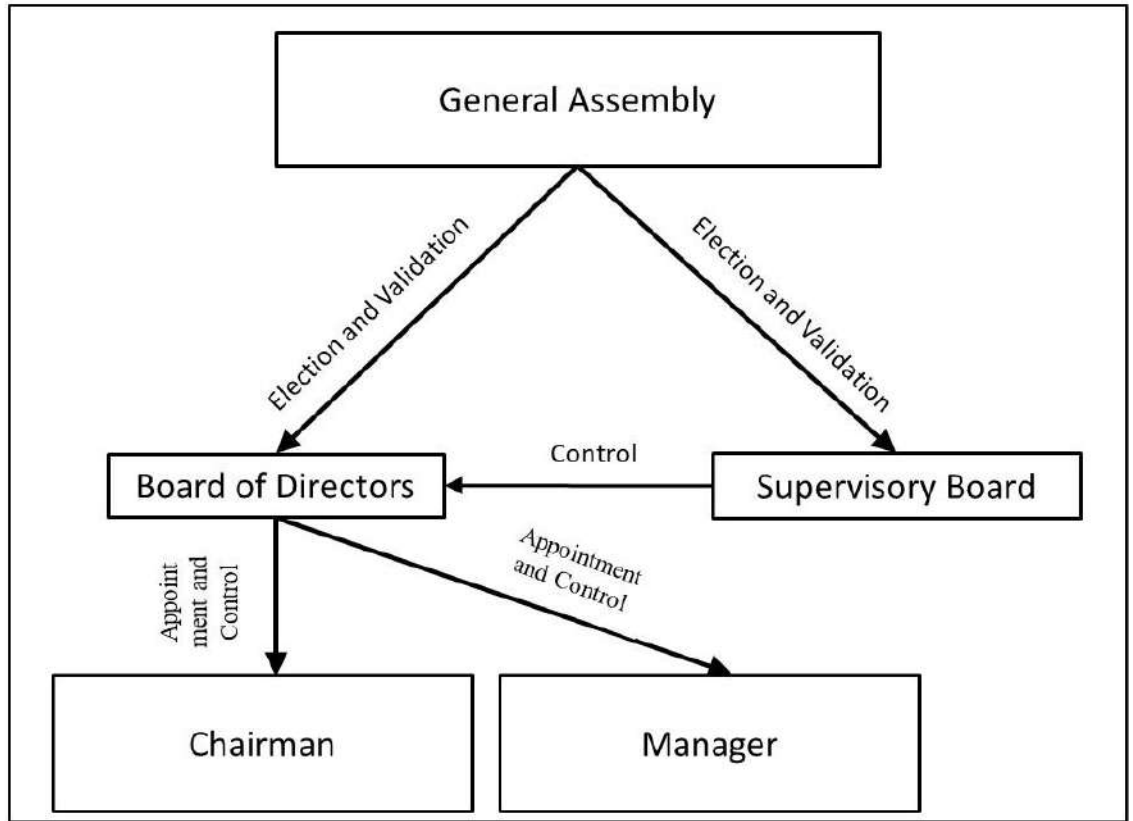
4. Third Period. Post -socialism - a period of democratic change since 1990

Since 1989 political changes have taken place in Bulgaria in all spheres of the socio-political life. The changes also affected on the Bulgarian cooperatives, giving a political and economic opportunity for the development of a new type of cooperative governance structures. Figure 3, 4 and 5 represent the traditional model of cooperative governance structure from the post socialist period. The common between these three structures is that all of them have General Assembly, Supervisory Board and Board of Directors. The last chooses the Chairman, the Manager or both. That structure has become a problem through the years because the Board of directors enters into an unregulated relationship with the Chairman or the Manager or (as shown on figure 5) a group of members creates informal structures and coalitions. In an effort to prevent the negative impact of these informal relationships, has been introduced changes in the legislation. The new and innovative governance structure is shown in Figure 6. According to the new governance structure the Board of Directors, the Supervisory Board and the Chairman are directly elected by the General meeting? Assembly.

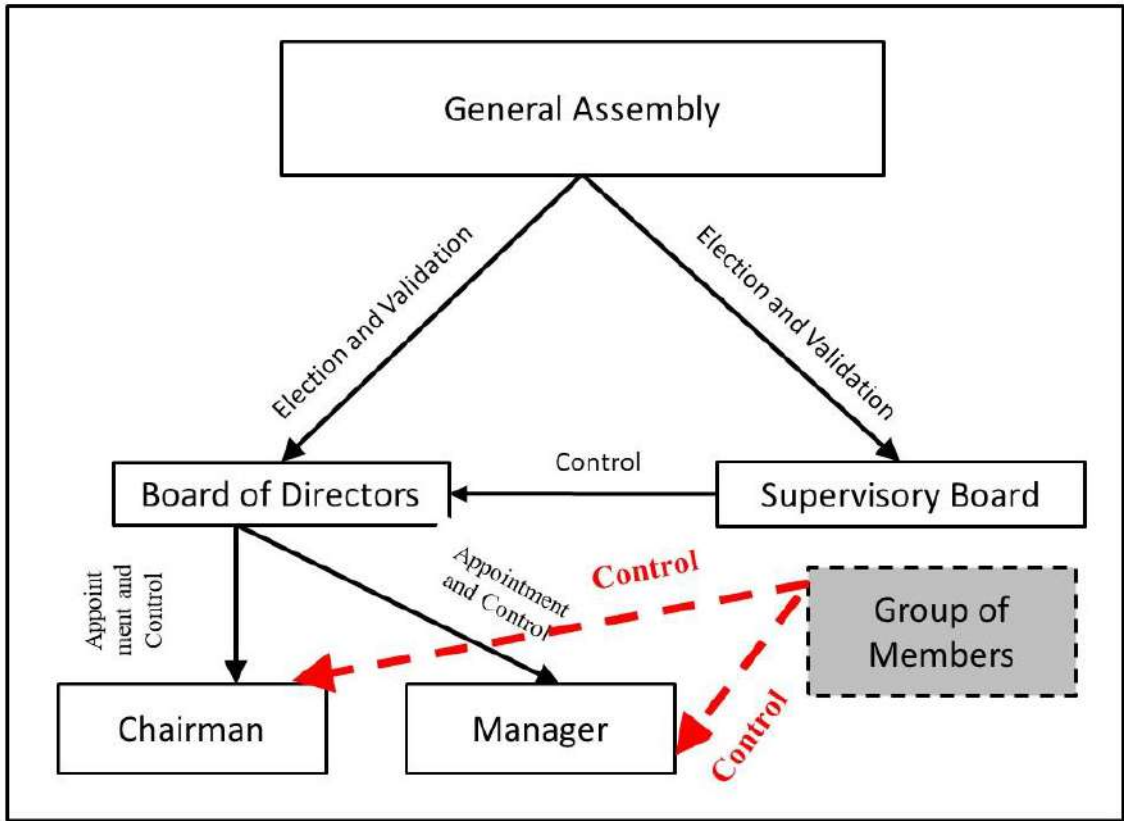
**Figure 3. A cooperative governance structure during post socialist period:
Traditional extended model I**



**Figure 4. A cooperative governance structure during post socialist period:
Traditional extended model II**

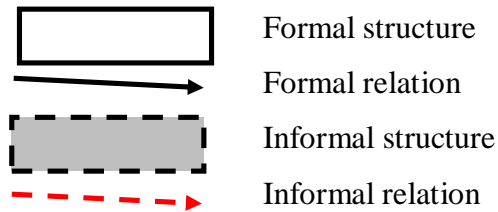


**Figure 5. A cooperative governance structure during post socialist period:
Traditional extended model III**

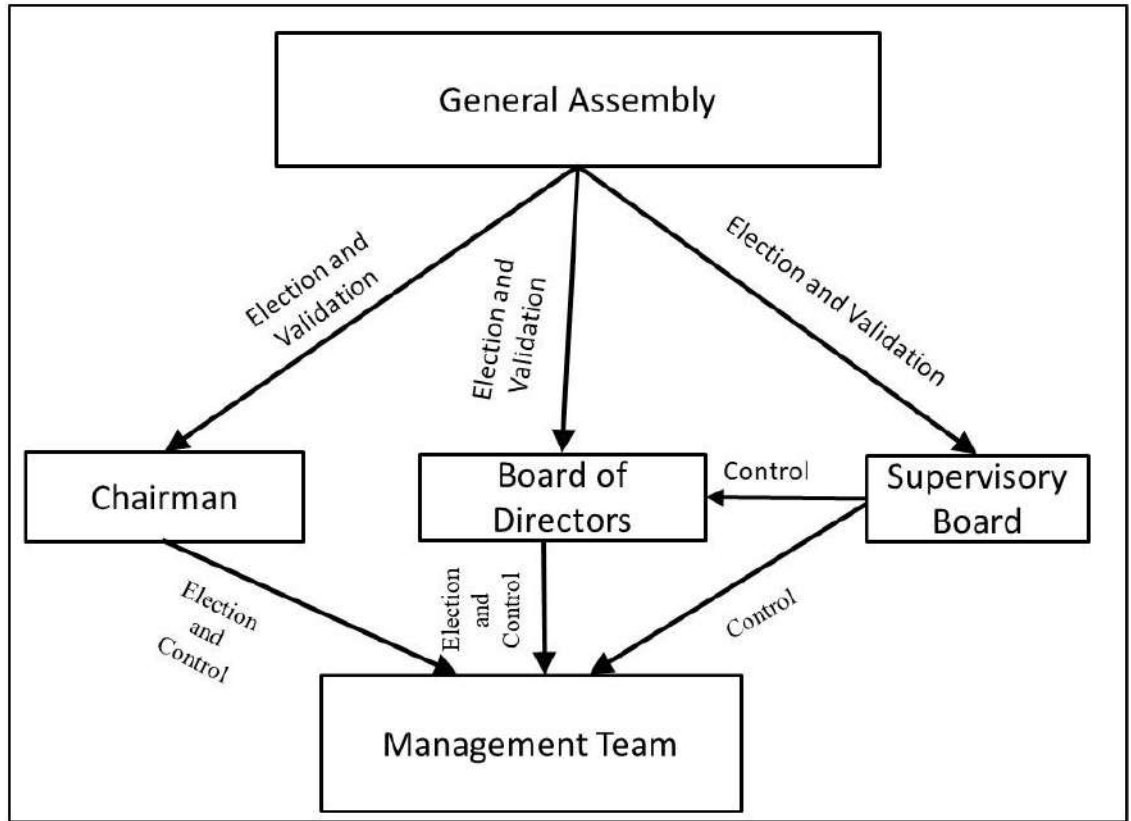


Source: own figure

Legend:



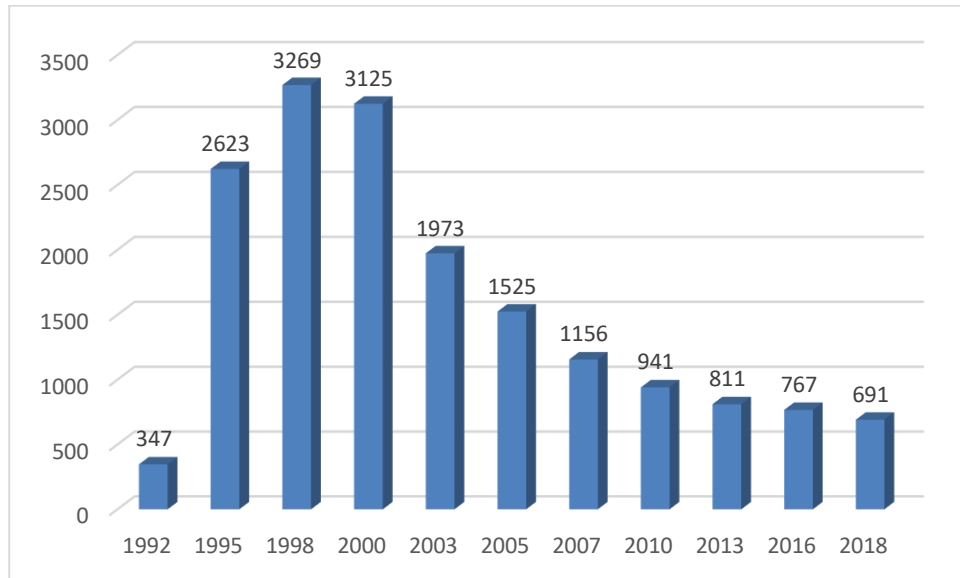
**Figure 6. A cooperative governance structure during post socialist period:
Innovative model**



Cooperative values and principles during this period generally follow the cooperative values and principles of the pre-socialist period. For this reason, we will not list them in detail, as they have already been shown when presenting the pre-socialist period.

In the period 1992-1996 there was an increased in the number of agricultural cooperatives, with the increase being over 140% (Graph 1). In 1997-1999 there was a stabilization. Since 1999, the number of agricultural cooperatives has been decreasing. In 2005, only half (1525) of those operating in 1998 was still functioning. In the period 2005-2016, they gradually lost their attractiveness and continued to reduce the number of agricultural cooperatives. During these years, over 50% reduction was recorded, with only 767 cooperatives remaining in operation in 2016. This is the result of the membership drop caused the dissatisfaction of members due to the failure to respect the cooperative values and principles.

Graph 1. Dynamics in the number of agricultural cooperatives in Bulgaria



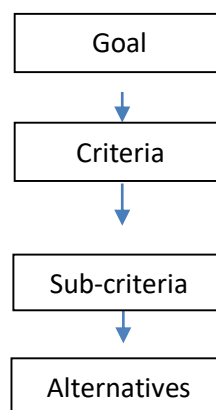
Source: Agrostatistics, MAF (2019), 2018 is an estimation

5. Methodology

The Analytic Hierarchy Process (AHP) is part of multi-criteria approach as a decision-making model constructed for synthesis of information. Its main benefits are when one has to solve problems that does not have clear quantitative measure, especially when the problem is related to social elements, subjective opinions, etc. The application of the model can be complicated and often requires a complex methodology.

The AHP together with Analytic Network Process (ANP) were introduced and their theoretical frame were developed by T. Saaty (Saaty, 2001). Historically and logically the AHP is the first model that appears (Saaty, 1980). AHP can help with weighing of various alternatives according to a set of criteria, when the influences between alternatives and criteria are hierarchical. At the top of the hierarchy is the decision-making goal (Figure 7).

Figure 7: Analytic Hierarchy Process



Sours: T. Saaty (Saaty, 2001)

When evaluating the influence of the criteria, it is necessary to make pairwise comparisons between them. In fact, we create a matrix where the criteria are used as rows and columns. These comparisons are made on a scale from 1/9 to 9, where 1 means that both criteria have equal influence on the alternatives, 9 means that the criteria on the row has very strong influence and the factor on the column has no influence, 1/9 means that the criteria on the column has very strong influence and the criteria on the row has no influence. In table 3 are summarized possible scores and their explanation for the estimation of the elements.

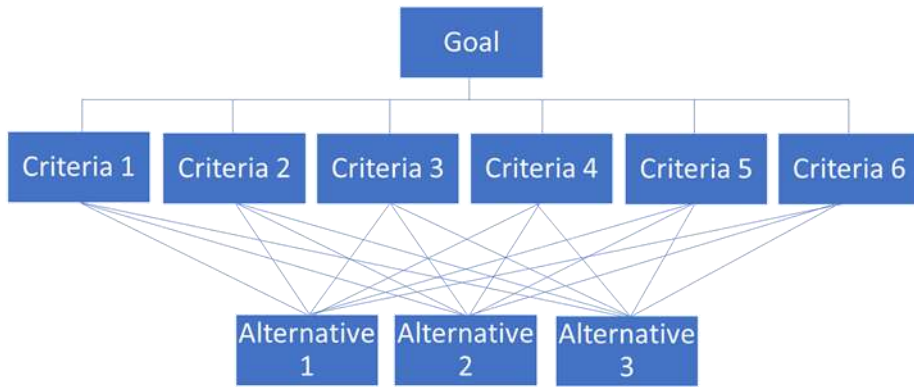
Table 3: The scale for estimation

<i>Numerical</i>	<i>Intensity of Importance</i>	<i>Definition Explanation</i>
1	Equal Importance	Two activities contribute equally to the objective
2	Weak or slight	
3	Moderate importance	Experience and judgement slightly favour one activity over another
4	Moderate plus	
5	Strong importance	Experience and judgement strongly favour one activity over another
6	Strong plus	
7	Very strong or demonstrated importance	An activity is favoured very strongly over another; its dominance demonstrated in practice
8	Very, very strong	
9	Extreme importance	The evidence favouring one activity over another is of the highest possible order of affirmation

Source: (Saaty, Vargas, 2006)

The next step is to make pairwise comparison of the alternatives according every criterion. The process is visualized on figure 8.

Figure 8. The process for pairwise comparison of the alternatives according every criterion.



Source: (Saaty, Vargas, 2006)

During the process of the application of the AHP model, we first define the alternatives. In the recent study our purpose is to evaluate the three historical periods that are described in the text above. This is the reason we use the tree periods as alternatives:

Table 4. Alternatives of the model

Alternative 1	Pre- socialism
Alternative 2	Socialism
Alternative 3	Post- socialism

Source: own table

Second, we have to define the criteria. We would like to evaluate the historical periods (alternatives) according the cooperative values and principles and we are going to use the cooperative values and principles, which we identified and described earlier in the paper. The values and principles that we are going to use as criteria are shown in table 5. The reason we choose these seven values and principles as a criterion is because they are a combination of basic values and principles that the cooperatives are trying to apply. We also limit the number of values and principles up to 7, because if we use more values and principles the amount of the questions in the questionnaire will grow dramatically. So, at the end we choose the most important combination of values and principles according to the authors of the study (table 5) and continue the application of the AHP method.

Table 5. Criteria of the model

Criterion 1	One Member – one vote
Criteria 2	Voluntary and Open Membership

Criteria 3	Non-interference from the state
Criteria 4	Self-help and Solidarity
Criteria 5	Democratic Management and Member Control
Criteria 6	Member Economic Participation
Criteria 7	Proportional remuneration

Source: own table

The next step is to create a questionnaire that the experts have to estimate the pairwise comparison between alternatives according to every criterion. The estimates were done by six experts independently and the results are calculated based on the averages of the estimates. The experts that participate in the research are independent experts. That means that we are not using members or member of the governing bodies of the cooperatives because, from our preliminary conversations, they do not possess the necessary knowledge in historical aspect to make justified estimate. That fact was a surprise for us, so we decided to question only experts with proven knowledge about cooperatives.

6. Results

After the estimation we take the averages of the pairwise estimates from the experts and create the cluster matrix. The cluster matrix gives the weights of the different criteria (table 6) and is used to calculate the final results. According the experts' estimation, the principle Democratic Management and Member Control has 21.7% weight and is the most important for the cooperative development. The second important principle is Self-help and Solidarity with 16%. All the other values and principles that take part of the research have weight between 10.2% and 14.2%

Table 6. Cluster matrix

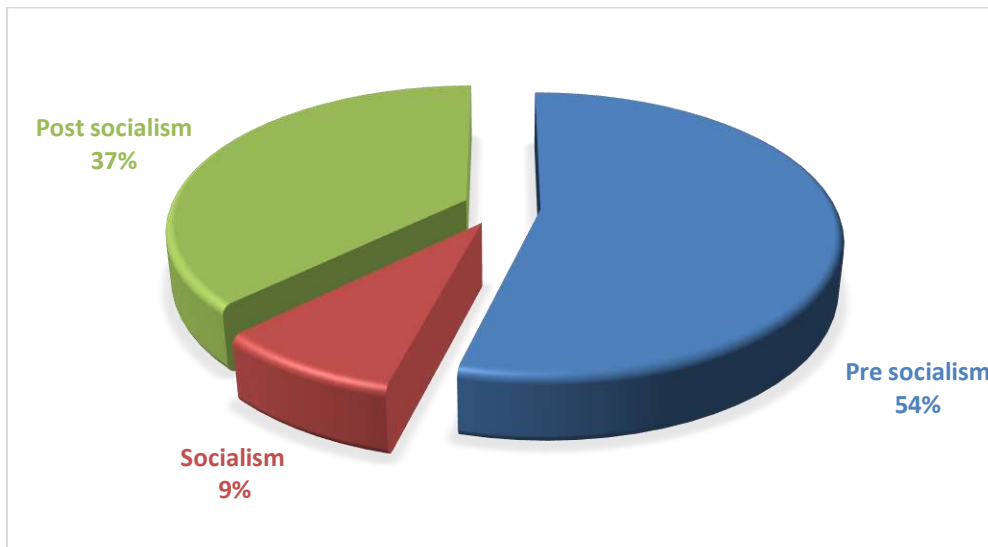
One Member – one vote	13,6%
Voluntary and Open Membership	14,2%
Non-interference from the state	10,2%
Self-help and Solidarity	16,0%
Democratic Management and Member Control	21,7%
Member Economic Participation	10,5%
Proportional remuneration	13,8%

Source: own table

The final results from the calculations of the AHP model are presented on figure 9. The result after applying AHP classifies the alternatives in percentage terms, with the sum of the individual scores being 100. We can observe, which of the alternative best suits the values and principles used as criteria. Subsequently, we will use the results to confirm or reject the hypotheses made at the beginning of the study. According to the

expert estimations, Pre- socialist period corresponds to the greatest extent to the cooperative principles and values – 54%. Post- socialist period with 37% corresponds less. And finally, the Socialism period corresponds only 9%. As noticed in the beginning of the study the research assumption is that the satisfaction of cooperative members is closely related to the practical application of the cooperative values and principles. When we have higher % that corresponds to a higher level of members’ satisfaction, because the values and principles are applied in high degree.

Figure 9. Weights of the alternatives (historical periods)



7. Comments of the results

We can conclude that the hypothesis 1 is confirmed by the results. The pre-socialist period applies the values and principles of cooperatives to the greatest extent (54%), which is why the satisfaction of the members is high and the cooperatives are developing positively. That result is also influenced by the practically applied governance structure that is shown on figure 1.

During the socialist period the values and principles were applied in a very low extend and as a result, the members’ satisfaction was very low. That confirm the second hypothesis H2. These results are logical, because the period is characterized by values and principles that lead to compulsory membership and centralized cooperative governance structure. Thus, the cooperative’s focus is on the needs of communist party and communist government. The member has only the role of endorsing the decisions of the communist party and its government. This explains, why the members’ satisfaction went to the lowest level.

The result for the post- socialist period with 37 % is well below the estimation of pre- socialist period. That means that cooperative values and principles are not strictly

applied. Although they exist in the legislation and are presented in the cooperative governance structure. However, this result shows that only the existence of formal cooperative governance structures is not sufficient for effective implementation of the cooperative values and principles. Furthermore, informal governance structures and coalition in the operative cooperative governing bodies can change the focus of the cooperative enterprise' operations from the member-owners to these informal structures and coalitions. That is the reason, why the cooperatives do not perform well in the last decade. In this way we can consider that hypothesis 3 is confirmed. In fact, the number of cooperatives has a strong growth at the beginning of the post socialist period (graph 1), which continues about 8 years. We can explain that growth with the initial enthusiasm in the farmers and cooperative members. After that, the number of cooperatives slowly decreases for the last about 20 years. The main reason for that is the low practical application of the cooperative value and principles. The initial enthusiasm is expired and the cooperatives cannot make use of it and gain growth. The members start to see the real problems – that the cooperatives serve mainly for the purposes of the management team (informal structures and coalitions), not for the individual cooperative member-owner.

8. Conclusion

Our study shows the importance of the cooperative value and principles for the members' satisfaction in the Bulgarian agricultural cooperatives. Furthermore, we observe it is not sufficient to have them embodied in the relevant cooperative law and in the cooperative governance structures but to implement them into practice for gaining member's satisfaction. In socialist and post- socialist periods, the agricultural cooperatives have the characteristic of pseudo-cooperative. Some economic groups or political actors, as well as mixture of these both set up only pro-forma the cooperative values and principles and the cooperative governance structures to make their own profit or strengthen their powerful positions.

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Lebanon: Monetary stability despite the economic crisis

(in French)

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UPJV, MUBS Lebanon

Abstract: *The exchange rate is one of the most important economic indicators that determine the internal and external economic situation of the country. In this context, we will study the stability of the exchange rate in Lebanon despite the existence of economic crisis and other problems and charges that contribute to the deterioration of this exchange rate. This reality in Lebanon led me to propose this study, and to raise issues that led us to real hypotheses explaining this economic and financial situation. For this, we will examine the role played by the Bank of Lebanon in protecting the Lebanese pound by highlighting the monetary policies adopted. On the other hand, we will study the role of the banking sector in the stabilization of the exchange rate, and finally we come to the external factors among which we consider the possibility of the existence of political pressures to save the Lebanese pound.*

Therefore, we find that the Central Bank of Lebanon defines a fundamental objective of its work, which is to stabilize the currency of the pound, not to expose it to risk and reverse its deterioration through successful policies, in particular monetary policy. In addition, we consider the role played by the banking sector through commercial banks, considered as the economic life of Lebanon and the main assistant of the central bank in the implementation of its policies. I will use my analytical approach, descriptive approach and historical approach, in which I will collect information, reports, data, evidence, tables and analyses to achieve the results. scientific requirements. In addition, I will rely on a questionnaire that I will prepare to investigate the opinion of economists and financiers on the problem. In conclusion, I will analyse the results of my research, from my point of view, to try to answer the problems posed by this study.

Finally, in my research summary, it is considered that the factors of influence are purely monetary, the Bank of Lebanon playing a more important role: the commercial banks and the confidence of the Lebanese in their currency.

Key words: *Exchange rate, monetary stability, Central Bank, economic crisis, commercial banks, economists, financiers.*

JEL code : *E58*

1 Introduction

Le taux de change est l'un des indicateurs économiques les plus importants qui déterminent la situation économique interne et externe du pays. Les pays du monde s'efforcent aujourd'hui de maintenir leur taux de change et donc de le stabiliser à des niveaux proches des principales monnaies, car le taux de change joue un rôle important sur la performance financière, commerciale et économique. En plus, il détermine le statut de l'état économique mondial. Cette interdépendance économique a amené les pays du monde à paniquer afin de préserver leur situation monétaire et financière, afin d'atteindre la croissance économique souhaitée.

Dans ce cadre, nous allons étudier la stabilité du taux de change au Liban malgré l'existence des crises économiques et d'autres problèmes et charges qui contribuent à la détérioration de ce taux de change. Cette stabilité questionnable montre l'importance de cette étude qui va essayer de révéler les causes principales de la stabilité du taux de change à la lumière de toutes les problèmes persistantes. En réalité, il existe une corrélation entre la situation économique et la situation monétaire de l'État. En effet, toute détérioration économique affectera tous les secteurs, y compris le secteur monétaire et le taux de change.

Cette réalité au Liban, m'a amené à proposer cette étude, et à soulever des problématiques qui nous ont conduit à des hypothèses réelles expliquant cette situation économique et financières. Pour cela, nous examinerons le rôle joué par la Banque du Liban pour protéger la livre libanaise en soulignant sur les politiques monétaires adoptées. D'une autre part, nous allons étudier le rôle du secteur bancaire dans la stabilisation du taux de change, et finalement nous venons sur les facteurs externes parmi lesquelles on considère la possibilité de l'existence des pressions politiques visant à sauver la livre libanaise.

Au début, je connaîtrai le taux de change et le profil de la situation économique et financière du Liban, puis je parlerai de la Banque du Liban et de son rôle dans le maintien du taux de change, du rôle du secteur bancaire et des facteurs politiques internes et externes.

Par conséquent, nous constatons que la Banque centrale du Liban définit un objectif fondamental de son travail, qui consiste à stabiliser la devise de la livre, à ne pas l'exposer au risque et à inverser sa détérioration par le biais de politiques fructueuses, en particulier la politique monétaire, qui est à la base de cette stabilité. De plus, la banque centrale participe au maintien de la monnaie afin de parvenir à la stabilité monétaire pour certains objectifs politiques internes ou externes. En plus, nous considérons le rôle joué par le secteur bancaire par le biais des banques commerciales, considérées comme la vie économique du Liban et l'assistant principal de la banque centrale dans la mise en œuvre de ses politiques. Cela signifie que plusieurs facteurs externes contribuent au renforcement de la lire et à sa non-détérioration.

Je m'appuierai dans mon étude sur l'approche analytique, l'approche descriptive et l'approche historique, dans lesquelles je collecterai des informations, des rapports, des données, des éléments de preuve, des tableaux et des analyses pour atteindre les résultats économiques scientifiques requis. En plus, je m'appuierai sur une questionnaire que je préparerai pour enquêter l'opinion des économistes et des financiers concernant le problème posé. En conclusion, j'analyserai les résultats de mes recherches, de mon point de vue, afin d'essayer de répondre aux problèmes posés par cette étude.

2 Situation économique et monétaire du Liban

Avant de se propager dans les détails de l'étude, nous devons introduire la situation de l'économie libanaise, du taux de change et d'autres sujets dont nous pourrions avoir besoin dans nos recherches.

2.1 Définition du taux de change

Le taux de change nominal est le prix auquel les deux monnaies sont échangées, soit par le biais du mécanisme d'offre et de demande sur les marchés des devises pour les pays qui ont libéralisé les taux de change de leurs monnaies nationales, soit directement par décision des autorités monétaires des pays dont les gouvernements continuent de contrôler les taux de change[1].

Le taux de change réel est le taux de change qui mesure le pouvoir d'achat extérieur de la monnaie nationale, c'est-à-dire son pouvoir d'achat par rapport à des biens étrangers, et le taux de change nominal est divisé par le taux de change permettant la parité de pouvoir d'achat. Ce dernier est défini comme le produit de la division de la valeur monétaire d'un panier de biens dans le pays en devise étrangère par la valeur monétaire du même panier sur le marché intérieur.

2.2 La situation économique libanaise récente (2018-2019)

Tout le monde s'interroge sur la situation économique, financière et monétaire au Liban, qui vit une crise financière et économique. La crise semble être imminente et menace d'un effondrement financier et économique. Le Fonds monétaire international (FMI) a déclaré que l'économie libanaise est sur une voie non viable, ce qui nécessite une action urgente et un resserrement des finances publiques.

En ce qui concerne le PIB du Liban, celui-ci sera représenté dans la figure 1 ci-contre, dans laquelle la crise économique est très évidente en observant les valeurs décroissantes du PIB dont la chute en 2011 a été causée par la crise syrienne.

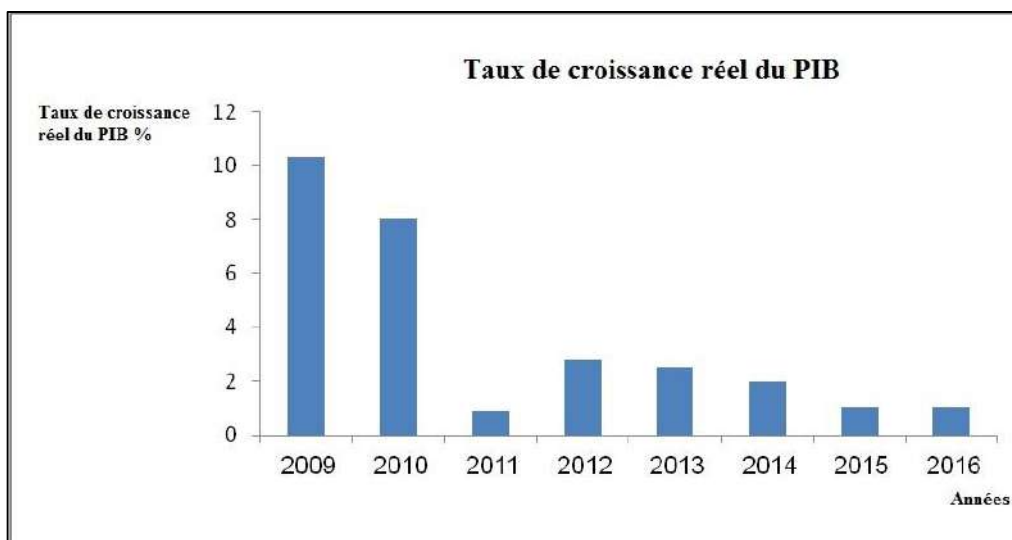


Figure 1: Taux de croissance du PIB.

Le début de 2018 a enregistré une poursuite des faibles taux de croissance du secteur réel de l'économie nationale. Les rapports de certaines institutions financières internationales, dirigées par la Banque mondiale et le Fonds monétaire international (FMI), indiquent qu'en 2019, l'économie libanaise souffrira des effets des tensions politiques, qui continuent de peser sur l'activité économique. Selon la Banque mondiale, la crise syrienne depuis 2011 a eu un impact négatif sur tous les secteurs économiques du Liban. La croissance n'a pas dépassé 2,5% depuis 2012, contre 8% en 2009 et 2010. L'économie libanaise a crû de 1,8% en 2016 et de 1,3% en 2015. Le FMI a estimé la croissance économique réelle du Liban à 1,2% en 2017, et devrait atteindre 1,5% en 2018 et 1,8% en 2019. Ces faibles chiffres sont principalement dus aux répercussions persistantes des crises politiques et sécuritaires régionales sur les niveaux de confiance dans le pays et sur le secteur immobilier, le tourisme, les investissements et les activités commerciales.

Les statistiques du département central des statistiques font apparaître une hausse de l'indice des prix inflationniste de 5,19%, à 104,14 en février 2018, contre 99,00 le même mois en 2017, alors que le prix de toutes les composantes de l'indice augmentait. Au fur et à mesure que l'inflation augmentait, la pression augmentait en raison de la hausse des prix mondiaux des produits de base et de la dévaluation du dollar par rapport à l'euro, entraînant une hausse significative des prix à l'importation.

Selon les statistiques du ministère de l'Industrie libanais, les exportations ont diminué de 2,11% d'une année sur l'autre. Quant au secteur immobilier, il est tombé à environ 20%, ce qui a conduit certains promoteurs immobiliers à se tourner vers d'autres pays, tels que Chypre, qui trouvent une demande d'achat libanaise.

La figure 2 ci-dessous montre la balance commerciale du Liban pour l'année 2012 jusqu'à l'année 2016.

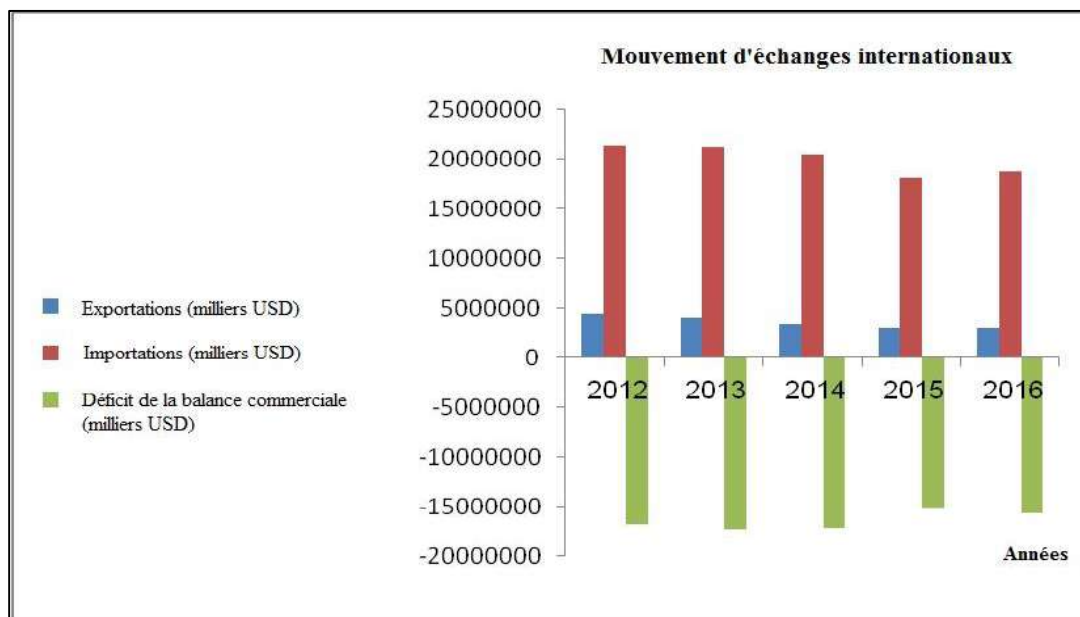


Figure 2: Balance commerciale libanaise.

Selon la Banque du Liban, les prix de l'immobilier ont chuté de plus de 10% en 2017, alors que le PMI indique que la confiance du secteur privé dans l'instabilité politique continue d'être affectée.

Le taux de chômage a augmenté de 36% à 42% chez les 18-24 ans et Les indicateurs industriels ont révélé la fermeture de quelque 388 entreprises entre 2012 et 2015 sur les 2 365 entreprises employant environ 78 000 personnes.

3 Ingénierie financière de la Banque du Liban: un moyen financier, monétaire et économique

La Banque du Liban est la Banque centrale libanaise. Elle a été créée le 1^{er} août 1963 mais son véritable démarrage a eu lieu le 1^{er} avril 1964. La banque est actuellement dirigée par Riyad Salameh, qui a été nommé meilleur gouverneur de la banque centrale du Moyen-Orient en 2005. La banque est responsable de l'émission de la monnaie libanaise. La stabilité monétaire au Liban et l'organisation des transferts de fonds maintiennent l'intégrité du secteur bancaire et contrôlent et déterminent les lois. La banque a lancé un plan quinquennal de réduction de la dette libanaise, dont la succursale principale est à Beyrouth et possède des succursales à Aley, Baalbek, Bikfaya, Jounieh, Nabatieh, Saïda, Tripoli, Tyre et Zahlé.

Au cours des trois dernières décennies, le monde a connu une nouvelle innovation de civilisation qui a incité les États à s'occuper de deux intermédiaires essentiels: l'argent et la critique. Une nouvelle science, "l'ingénierie financière", est apparue. Cela s'agit du développement et de l'application de la technologie financière, qui comprend des aspects théoriques, des méthodes quantitatives et des produits financiers[2].

Depuis sa création en 1963, la BDL suit de près les développements qui ont lieu sur la scène locale et internationale, tout en se concentrant sur son objectif principal, à savoir la stabilité monétaire. Sur le plan international, le monde des finances a été témoin de changements majeurs résultant de la mondialisation rapide du secteur bancaire et des missions exceptionnelles confiées aux institutions bancaires et financières, telles que la lutte contre le blanchiment de capitaux et la corruption. En outre, les crises successives qui ont secoué les marchés émergents ont incité le comité de Bâle pour supervision bancaire à adopter de nouveaux principes directeurs, plus connus sous le nom de Bâle 2 et qui ont été progressivement appliqués par le Liban à 2008. Sur le plan national, l'objectif principal de la BDL continue à être le renforcement de la confiance dans la livre libanaise et le maintien de la stabilité monétaire, étant donné que cette stabilité est la clef de voûte pour la réduction de l'inflation, la stabilité des prix, la baisse de taux d'intérêt et une croissance économique soutenue.

Après la définition de la Banque du Liban va aborder, nous parlerons de son rôle et c'est là la base de cette recherche, où la Banque du Liban et les politiques adoptées sont le plus important de la stabilisation du taux de change et ont émergé des politiques de sauvetage adoptées par la banque.

Le Conseil central, dans le cadre des pouvoirs conférés à la Banque du Liban par cette loi, a les pouvoirs suivants:

1. Définit la politique monétaire et de crédit de la Banque du Liban
2. Etablit les règles pour l'application de cette loi

3. Détermine, à la lumière de la situation économique, le taux d'escompte et le taux d'intérêt des crédits et des notes de la Banque du Liban dans toutes les mesures relatives aux banques.

"La Banque centrale, du général, a pour mission de conserver des liquidités afin de garantir la base de la croissance économique et du statut social, et plus particulièrement la mission de la Banque centrale [3]:

- Sauvegarde de la sécurité de la monnaie libanaise,
- Maintenir la stabilité économique,
- Maintenir l'intégrité du système bancaire,
- Développer le marché monétaire et financier", le gouverneur de la Banque du Liban a expliqué le mécanisme et les objectifs de l'ingénierie financière à travers les supports écrits et visuels, les données, les entretiens et la télévision."

3.1 Mécanisme approuvé et ses résultats

3.1.1 Les étapes

Les détails et les étapes de l'ingénierie financière, qui ont été appliqués au second semestre 2016, peuvent être définis comme suit:

1. La Banque du Liban a procédé à un échange avec le ministère des Finances libanais, qui a notamment obtenu des obligations en euro-obligations émises par le ministère des Finances d'une valeur de 2 milliards de dollars, les intérêts allant de 6,25% sur six ans à 6,85% sur 13 ans. De la même valeur en livres libanaises de son portefeuille.
2. La Banque du Liban a vendu ses obligations en euro et a émis des certificats de dépôt en dollars d'une valeur d'environ 11 milliards de dollars aux banques commerciales, contre de nouvelles entrées de dollars transférées hors du Liban par la banque.
3. La Banque du Liban appliquait un taux d'intérêt de zéro pour cent pour les titres en livres libanaises (bons du Trésor et certificats de dépôt) détenus par les banques commerciales dans leurs portefeuilles, d'une valeur équivalente à la transaction de la deuxième étape (euro-obligations et certificats de dépôt en USD). Également payer la moitié de la valeur des produits d'intérêts immédiatement (qui sera réalisé pour les banques et les institutions financières à l'échéance et d'une valeur totale d'environ 9,600 millions \$), et après ce sujet de traitement à déduction volontaire à l'intérieur des termes des avantages de valeurs décotées par 50% pour la Banque du Liban.

Conformément aux dispositions de la troisième phase, les obligations de l'État libanais, que la Banque du Liban avait précédemment réglées pour les banques précédemment achetées à l'État, ont été inscrites à son actif en contrepartie de l'utilisation de certains éléments de passif inclus dans son budget. Ainsi, la Banque du Liban n'a pas utilisé de fonds publics pour financer cette ingénierie, et n'a pas non plus porté de fardeau.

3.1.2 Les résultats

Cette ingénierie financière a de multiples objectifs et dimensions, et son impact a été surveillé en mettant en évidence les résultats suivants:

1. Tout d'abord, renforcer la banque étrangère d'actifs en devises du Liban, de la prémisse que l'obtention d'un budget solide est nécessaire pour maintenir l'intérieur et à l'extérieur de la stabilité de la confiance, et donc son impact positif sur la stabilité du taux de change et taux d'intérêt. Grâce à l'ingénierie financière, les avoirs en devises de la Banque du Liban ont atteint le niveau record de 41 milliards de dollars, ce qui donne une stabilité à la livre libanaise et aux taux d'intérêt.
2. Le renforcement du capital des banques, où la Banque du Liban a chargé celles-ci d'affecter le produit du mécanisme d'ingénierie financière à la deuxième tranche de son capital.
3. Augmenter les liquidités en monnaie locale, afin de garantir les besoins de financement du secteur public et le coût optimal. L'ingénierie financière a réussi à atteindre cet objectif grâce à la croissance des dépôts, qui se situait à 2,5 pour cent après l'ingénierie financière, par rapport à 0,9 pour cent depuis le début de l'année et jusqu'en Avril 2019. il a connu une croissance annuelle des dépôts dans une année forfaitaire 2016 à 7,2 pour cent.
4. Améliorer le statut de la dette publique en réduisant son coût. L'architecture financière de la Banque du Liban a entraîné une baisse des taux d'intérêt des obligations du Trésor à 5 ans de 6,74% à 5%, ainsi que du taux d'intérêt des dépôts à long terme et des dépôts en livres libanaises. 9% à 8,4%. Afin d'améliorer le statut de la dette publique, le succès de cette opération renforcera la confiance dans les euro-obligations libanaises.
5. Améliorer la situation de la balance des paiements en adoptant les moyens d'accroître la demande intérieure et la productivité, favorisant ainsi la croissance et le développement.
6. Améliorer la cote de crédit du Liban.

3.1.3 Prochaines étapes

1. Il faut améliorer la compréhension du délicat équilibre de la politique monétaire représenté par la Banque du Liban.
2. En dépit de tous les négatifs qui flottent à la surface de la scène libanaise, il ne faut pas négliger le fait très important, souvent négligé, et que le Liban se caractérise par sa capacité à des secteurs internes des finances publiques et privées, sans avoir recours à des fonds externes ou aide.
3. Nous estimons que l'évaluation de l'ingénierie financière devrait être fondée sur des critères objectifs au moyen d'une analyse coûts-avantages. En un coup d'œil, il est clair

que cette ingénierie a produit des résultats pratiques pour toutes les parties prenantes et n'a pas engendré de fardeau ni de coûts pour la banque centrale ou le gouvernement.

4. La perspective générale devrait être corrigée en fonction des faiblesses et des déséquilibres réels de la situation économique au Liban.

Ces initiatives et politiques monétaires, traditionnelles et non conventionnelles, exécutives et organisationnelles, servent toutes à servir la stabilité politique si elles sont bâties sur elles. L'exigence de stabilité politique est de parvenir à l'immunité économique. La volonté politique de saisir les opportunités économiques, de rationaliser la volonté et de mettre en œuvre la planification stratégique et la renaissance est toujours disponible.

Il en ressort que l'objectif de la Banque du Liban est de maintenir la stabilité du taux de change au Liban car cette politique donnera confiance aux investisseurs du Liban, de la livre libanaise et de l'économie libanaise, Cela était évident grâce aux permis du gouverneur de la Banque du Liban ces dernières années, Salameh a dit: " La livre libanaise est stable et le restera. En juin 2017, la Banque du Liban a consolidé ses réserves en devises. Cela confirme que la Banque centrale a les moyens, comme elle le dit toujours, d'assurer la stabilité de la monnaie nationale. L'écurie de la livre libanaise taux de change renforce la confiance dans l'économie, renforce les achats pouvoir et contribue à la stabilité de la structure des taux d'intérêt ", Salameh a déclaré aux participants à une conférence sur les PME à la BIEL[4].

Salameh a répété : "Les événements douloureux dans notre région et la guerre en Syrie ont nui affecté la croissance économique au Liban, qui a également eu un impact négatif difficultés économiques et financières dans les pays où le travail libanais. Les prêts bonifié sont permis de maintenir une croissance positive de Liban, en raison de leur effet sur la demande locale ", a déclaré Salameh[5].

Il est donc clair, que la Banque du Liban s'appuie sur des politiques économiques à grande échelle visant à stabiliser le taux de change en termes d'indicateurs importants de l'économie libanaise, ce qui a lié l'effondrement économique du Liban directement lié à la détérioration du taux de change libanais.

4 La relation entre le secteur bancaire et la stabilité du taux de change au Liban

Le secteur bancaire libanais comprend 69 banques réparties entre 45 banques commerciales, 16 banques d'investissement à moyen et long terme, des banques à moyen et long terme, cinq banques islamiques et trois banques bancaires privées. En termes de propriété, outre les banques libanaises, le secteur bancaire libanais est l'un des plus grands secteurs bancaires arabes et internationaux en termes de taille de l'économie nationale, avec un actif total de 370% du PIB nominal à la fin de 2014. Produit intérieur brut, prêts à environ 177% de celui-ci.

Le secteur bancaire libanais est stable et financièrement sain. Il joue un rôle clé dans l'économie nationale, où les banques dominant toujours le système financier du pays, en tant que principal bailleur de fonds des particuliers et des institutions. L'activité bancaire dans son ensemble est soumise à la loi sur le commerce (1942) et à la loi sur la monnaie et le crédit (1963). Les banques et autres institutions financières au Liban opèrent sous la supervision de la Banque du Liban, la banque centrale, qui est l'autorité monétaire régissant le travail des banques dans le pays. La Banque centrale autorise la création de nouvelles banques, définit le

domaine d'activité des banques, dresse le portrait des actifs de la profession et impose les règles de précaution qui devraient être adoptées par le secteur.

L'organisme de réglementation est représenté au sein du Comité de contrôle bancaire, créé en 1967, qui surveille l'activité des banques et veille à la bonne application des lois et des règlements. Les progrès réalisés par le secteur bancaire libanais depuis plus d'une décennie a été atteint sans l'efficacité de la réglementation et de surveillance est juste et approprié pour chacun de la Banque du Liban et de la Commission de contrôle des banques, et sans une collaboration étroite avec l'Association des banques au Liban.

La Banque du Liban a concentré ses efforts sur la mise en place d'un secteur bancaire fort et résistant, capable de supporter de lourdes charges pendant la phase de reconstruction et de construction. La présence d'un secteur bancaire moderne et moderne au Liban lui permet d'atteindre son objectif premier qui consiste à restaurer son rôle de centre financier, bancaire et économique aux niveaux régional et international.

Le secteur bancaire a la capacité de résister aux chocs et aux crises, et de surmonter les chocs financiers, quelles que soient leur nature et leurs causes, et constitue un refuge régional sûr pour des investissements stables et rentables. Figure 3 représente la relation entre l'actif des banques et le taux de croissance économique.

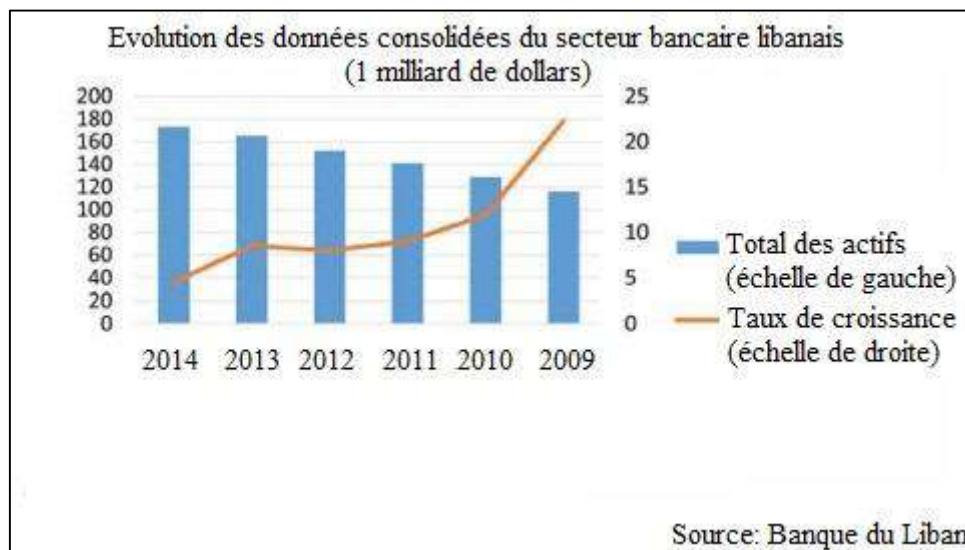


Figure 3: Relation entre le total des actifs et le taux de croissance économiques.

Enfin, comme indiqué précédemment, la Banque du Liban utilise le secteur bancaire comme un outil très important pour contrôler la liquidité, les taux d'intérêt et d'autres indicateurs permettant de stabiliser le taux de change. Mais aujourd'hui, la performance des banques est affaiblie par la pression exercée sur elles pour financer le secteur public et les conditions financières de certaines banques, qui ont conduit à une faible performance des banques ces derniers temps, mais nous ne pouvons pas être faibles car c'est toujours le secteur le plus fort du monde.

5 Le rôle des secteurs économiques libanais dans le maintien du taux de change

Les secteurs économiques libanais sont presque absents, où seuls deux secteurs principaux, la banque et les services, sont contrôlés: le tourisme est entré dans ces deux secteurs, mais la

situation en matière de sécurité et le risque élevé qui règne au Liban ont nui à l'efficacité du secteur du tourisme. Seulement 20% de leurs performances économiques, les secteurs économiques ne permettent donc pas de contrôler le taux de change, mais cela est dû à la politique monétaire adoptée par la Banque du Liban.

Il convient de noter que le cycle économique au Liban n'est pas sain, contrairement à la stabilité du taux de change, ce qui confirme ce que fait l'État libanais en séparant l'économie de la situation financière et monétaire.

6 La politique intérieure et étrangère et son rôle sur le taux de change

Le Liban a un système politique complexe, plus sectaire que politique, où il gouverne les partis politiques directement et partage le butin avec insolence, mais nous ne pouvons pas cacher qu'il existe une décision politique claire de ne pas sous-estimer la situation économique et financière du Liban en raison des intérêts des hommes politiques. Au Liban, où il occupait une place prépondérante lors de la formation du gouvernement, par crainte de l'effondrement de la livre libanaise, dont il a été question récemment. Outre les facteurs politiques externes qui veulent la stabilité financière et économique du Liban en raison de ses intérêts au Liban.

Il est clair que parallèlement à la politique monétaire de la Banque du Liban, il existe une décision politique visant à protéger le Liban économiquement et financièrement et à l'empêcher de faire faillite, comme en témoignent les sacrifices consentis par les hommes politiques au début de 2019 pour former un gouvernement sans tenir compte des sièges ministériels. La livre ne tiendra pas grand-chose si elles ne forment pas le gouvernement.

7 Conclusion de la partie théorique

À la fin de mes recherches, je me permettrai d'analyser ce que j'ai dit, d'un point de vue économique, car je suis un économiste.

En tant qu'économiste, nous allons commencer par un certain nombre de faits et de faits dans lesquels on peut énumérer les éléments suivants de manière simplifiée, en dehors de la complexité des chiffres:

1. L'augmentation des intérêts se répercute négativement sur le coût de la dette publique, ainsi que sur le coût de l'emprunt du secteur privé, qui ont un impact négatif sur la croissance économique.
2. Les banques souffrent d'un manque de liquidités en livre libanaise du fait que la majorité de leurs fonds sont investis dans des bons du Trésor libellés en liras, par le secteur public disposant de grosses sommes d'argent et par le secteur privé disposant de mandats plus petits[6].
3. Le grand intérêt que la Banque du Liban offre aux banques libanaises en échange de ses dépôts a contribué à la consommation de ses capacités, en plus des pressions financières auxquelles elle est confrontée pour faire face à de nombreux avantages.
4. En raison de la transformation des actifs des banques en crédits du secteur public, les banques ont perdu leur rôle d'intermédiaire dans le cycle normal de l'activité économique et ont été affectées par la situation financière difficile et fragile du secteur

public, qui a eu une incidence négative sur leur situation financière et leurs flux de trésorerie.

5. Le Liban atteindra bientôt une phase de déficit budgétaire total, en raison du déséquilibre entre les importations et les dépenses, qui menacerait complètement la stabilité financière, ce qui est spécifiquement mentionné dans le sixième paragraphe, où la difficulté de la situation financière rencontrée par les politiciens pour accélérer la formation de Gouvernement.

La Banque du Liban n'arrêtera pas la politique de soutien de la livre, comme le prétendent certains, et insiste pour intervenir sur le marché afin de maintenir le taux de change fixe de la livre libanaise, quoi que cela nécessite de consommer sa réserve actuelle de dollars et de devises. En outre, la taille de la réserve monétaire détenue par la Banque centrale est importante, confirmant ainsi la capacité de la banque à faire face à une crise qui dure plusieurs semaines, pas seulement une crise passagère, sachant que la réserve d'or augmentera à son tour les facteurs de confiance. Nous ajoutons ici que 65% des dépôts Au Liban, le dollar est exprimé en dollars, ce qui signifie que les déposants qui peuvent transférer leur argent de la lire au dollar ou à une devise étrangère constituent la minorité. Le relèvement des intérêts bancaires sur les dépôts en livres libanaises a séduit de nombreux déposants, bloquant leurs comptes pendant de longues périodes. Il a ajouté que les conférences internationales qui se tiendraient pour soutenir le Liban ne pourraient que renforcer le climat général positif.

En conclusion, j'ai trouvé des réponses raisonnables à une hypothèse de recherche: la Banque du Liban s'efforce de maintenir la livre libanaise, en plus du secteur bancaire, qui est le principal atout, en plus du rôle politique et de la décision politique libanaise et internationale de préserver le Liban et de ne pas le mettre en conflit. Trouvé en elle.

À cet égard, nous critiquons la politique financière de la Banque du Liban et de l'État libanais dans son ensemble, dans la mesure où elle accorde la priorité à la stabilité des échanges financiers et non à un cycle économique normal, et au fait qu'elle creuse la dette du Liban au lieu de recourir à un plan économique et financier productif. Mais j'avouerai que la politique monétaire a fait son devoir au cours des deux dernières décennies et a réussi à préserver la valeur de la livre libanaise, avec 750 000 employés payés en livres libanaises. Mais est-il temps que l'autorité politique contrôle le déficit et les finances publiques et déplace le cycle économique au Liban, mais le mouvement économique augmentera-t-il le niveau des échanges au Liban ou la séparation de l'économie du taux de change restera-t-elle sous le contrôle du Liban?

8 Partie pratique: Questionnaire concernant le sujet adressé

Après avoir collecté les informations, les indicateurs et les articles, et pour confirmer la validité des résultats, j'ai développé un formulaire scientifique que j'ai distribué à un échantillon de 20 personnes. Ce formulaire composé de 15 questions nous fournit les informations nécessaires pour confirmer nos recherches scientifiques et confirmer les résultats.

Le questionnaire comprend 15 questions, divisées en deux sections, un département économique, un département financier et un échantillon approuvé par des économistes et des financiers, afin de connaître le point de vue financier et économique à propos du sujet.

J'ai posé des questions sur le rôle de la Banque du Liban et des banques commerciales et sur la vigueur de la livre libanaise, ainsi que sur la monnaie des comptes financiers, où la majorité des participants étaient calculés en livres libanaises.

Une fois la distribution complétée et remplie, j'ai classé et traité les résultats, puis j'ai utilisé SPSS pour analyser ces résultats de manière à ce que l'étude soit purement scientifique. Les résultats de ce formulaire seront présentés et analysés ci-dessous, afin de les faire correspondre à la réalité, à nos études et à notre problématique.

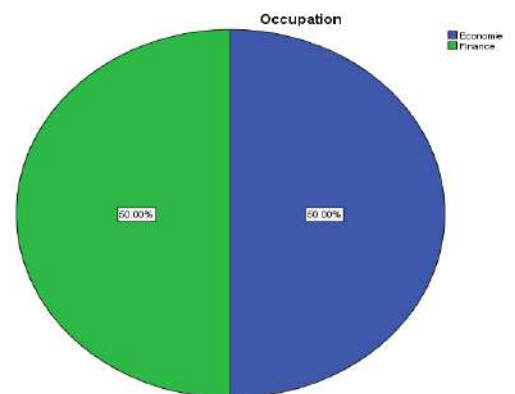
8.1 Résultats:

Les questions utilisées dans la questionnaire distribuée seront attachées en fin de cette étude.

J'ai compilé les résultats, les ai préparés, les ai traités et les ai inscrits sur la base, et je placerai les résultats de chaque question en fonction de l'occupation sur un tableau et un dessin circulaire comme présenté ci-contre:

Q1:

Occupation					
		Fréquence	%	% valide	% cumulé
Valide	Economie	10	50.0	50.0	50.0
	Finance	10	50.0	50.0	100.0
	Total	20	100.0	100.0	



Q2:

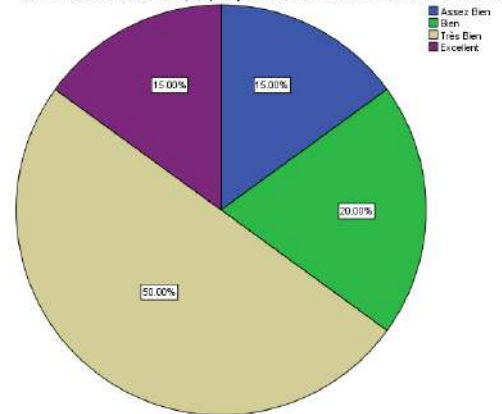
Quelle devise utilisez-vous pour vos comptes bancaires?					
		Fréquence	%	% valide	% cumulé
Valide	L.L.	15	75.0	75.0	75.0
	L.L.et USD	1	5.0	5.0	80.0
	USD	4	20.0	20.0	100.0
	Total	20	100.0	100.0	



Q3:

Sur une échelle de 1 à 5, à quel point faites-vous confiance à la livre libanaise?					
		Fréquence	%	% valide	% cumulé
Valide	Assez Bien	3	15.0	15.0	15.0
	Bien	4	20.0	20.0	35.0
	Très Bien	10	50.0	50.0	85.0
	Excellent	3	15.0	15.0	100.0
	Total	20	100.0	100.0	

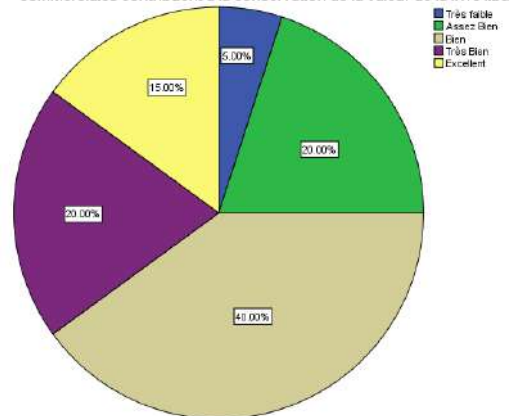
Sur une échelle de 1 à 5, à quel point faites-vous confiance à la livre libanaise?



Q4:

Sur une échelle de 1 à 5, dans quelle mesure pensez-vous que les banques commerciales contribuent à la conservation de la valeur de la livre libanaise?					
		Fréquence	%	% valide	% cumulé
Valide	Très faible	1	5.0	5.0	5.0
	Assez Bien	4	20.0	20.0	25.0
	Bien	8	40.0	40.0	65.0
	Très Bien	4	20.0	20.0	85.0
	Excellent	3	15.0	15.0	100.0
	Total	20	100.0	100.0	

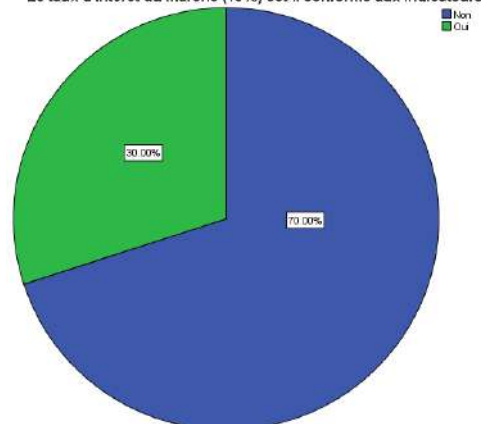
Sur une échelle de 1 à 5, dans quelle mesure pensez-vous que les banques commerciales contribuent à la conservation de la valeur de la livre libanaise?



Q5:

Le taux d'intérêt du marché (10%) est-il conforme aux indicateurs financiers?					
		Fréquence	%	% valide	% cumulé
Valide	Non	14	70.0	70.0	70.0
	Oui	6	30.0	30.0	100.0
	Total	20	100.0	100.0	

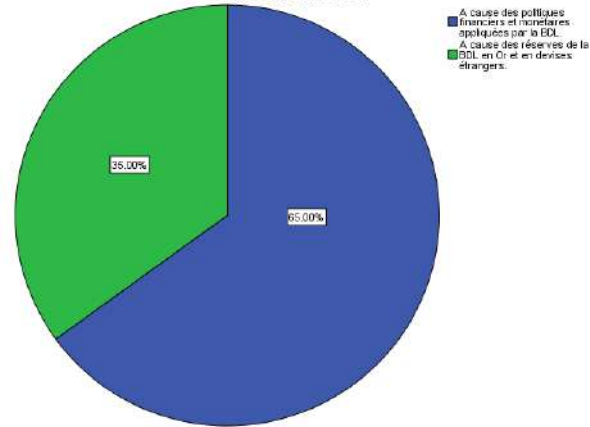
Le taux d'intérêt du marché (10%) est-il conforme aux indicateurs financiers?



Q6:

Pourquoi la livre libanaise ne s'est-elle pas effondrée lors de la crise financière mondiale de 2008?					
		Fréq.	%	% valide	% cu
Valide	Politiques financiers et monétaires appliquées par la BDL.	13	65.0	65.0	65
	A cause des réserves de la BDL en Or et en devises étrangers.	7	35.0	35.0	100
	Total	20	100.0	100.0	

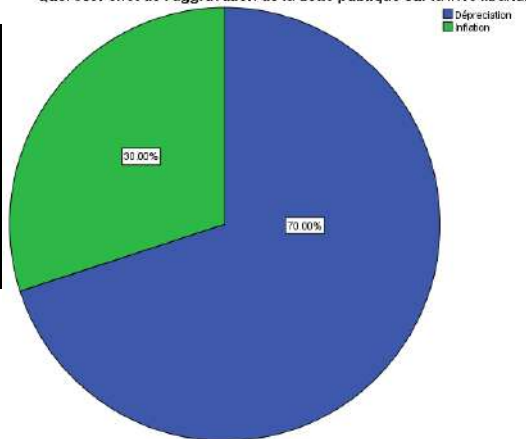
Pourquoi la livre libanaise ne s'est-elle pas effondrée lors de la crise financière mondiale de 2008?



Q7:

Quel est l'effet de l'aggravation de la dette publique sur la livre libanaise?					
		Fréquence	%	% valide	% cumulé
Valide	Dépreciation	14	70.0	70.0	70.0
	Inflation	6	30.0	30.0	100.0
	Total	20	100.0	100.0	

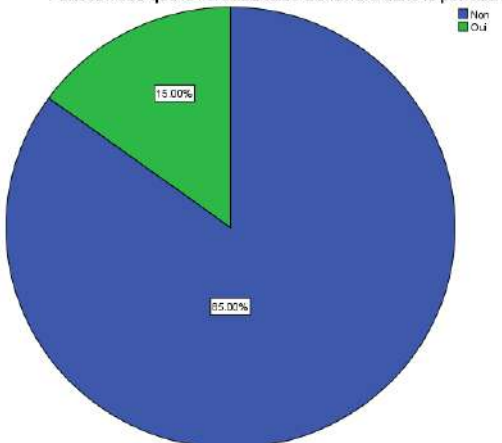
Quel est l'effet de l'aggravation de la dette publique sur la livre libanaise?



Q8:

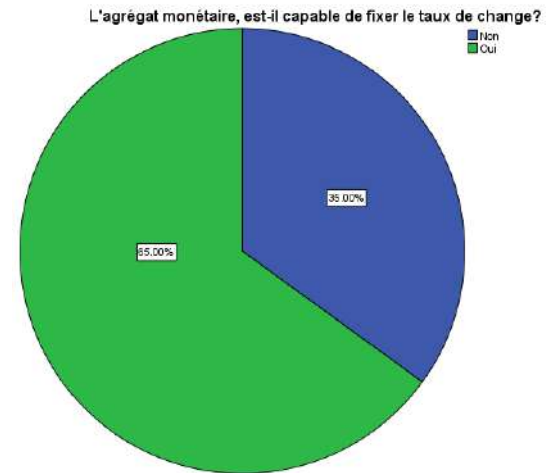
Pensez vous que la livre libanaise s'effondra dans la période à venir?					
		Fréquence	%	% valide	% cumulé
Valide	Non	17	85.0	85.0	85.0
	Oui	3	15.0	15.0	100.0
	Total	20	100.0	100.0	

Pensez vous que la livre libanaise s'effondra dans la période à venir?



Q9:

L'agrégat monétaire, est-il capable de fixer le taux de change?					
		Fréquence	%	% valide	% cumulé
Valide	Non	7	35.0	35.0	35.0
	Oui	13	65.0	65.0	100.0
	Total	20	100.0	100.0	



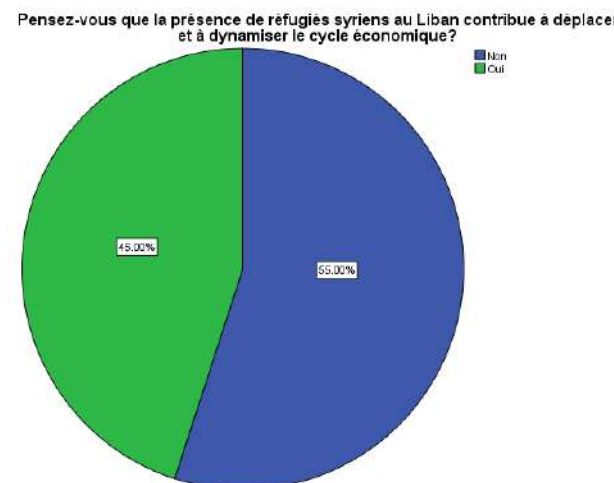
Q10:

Est-ce que la base de l'offre et de la demande détermine-t-elle le taux de change?					
		Fréquence	%	% valide	% cumulé
Valide	Non	3	15.0	15.0	15.0
	Oui	17	85.0	85.0	100.0
	Total	20	100.0	100.0	



Q11:

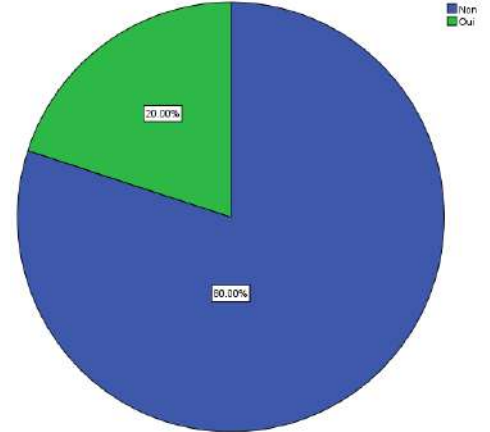
Pensez-vous que la présence de réfugiés syriens au Liban contribue à déplacer et à dynamiser le cycle économique?					
		Fréquence	%	% valide	% cumulé
Valide	Non	11	55.0	55.0	55.0
	Oui	9	45.0	45.0	100.0
	Total	20	100.0	100.0	



Q12:

Leur présence, joue-t-elle un rôle dans la stabilisation de la livre libanaise?					
		Fréquence	%	% valide	% cumulé
Valide	Non	16	80.0	80.0	80.0
	Oui	4	20.0	20.0	100.0
	Total	20	100.0	100.0	

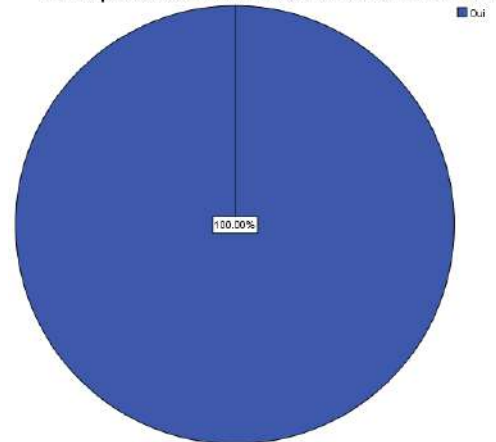
Leur présence, joue-t-elle un rôle dans la stabilisation de la livre libanaise?



Q13:

La banque centrale contribue-t-elle à la stabilisation de la livre libanaise?					
		Fréquence	%	% valide	% cumulé
Valide	Oui	20	100.0	100.0	100.0

La banque centrale contribue-t-elle à la stabilisation de la livre libanaise?



Q14:

Existe-t-il une décision politique intérieure ou extérieure de stabiliser le taux de change malgré la situation économique du Liban?					
		Fréquence	%	% valide	% cumulé
Valide	Non	1	5.0	5.0	5.0
	Oui	19	95.0	95.0	100.0
	Total	20	100.0	100.0	

Existe-t-il une décision politique intérieure ou extérieure de stabiliser le taux de change malgré la situation économique du Liban?

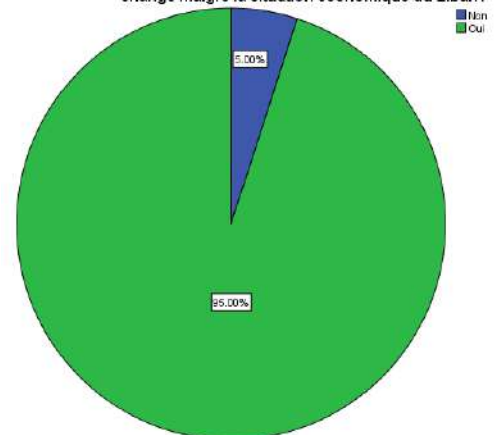
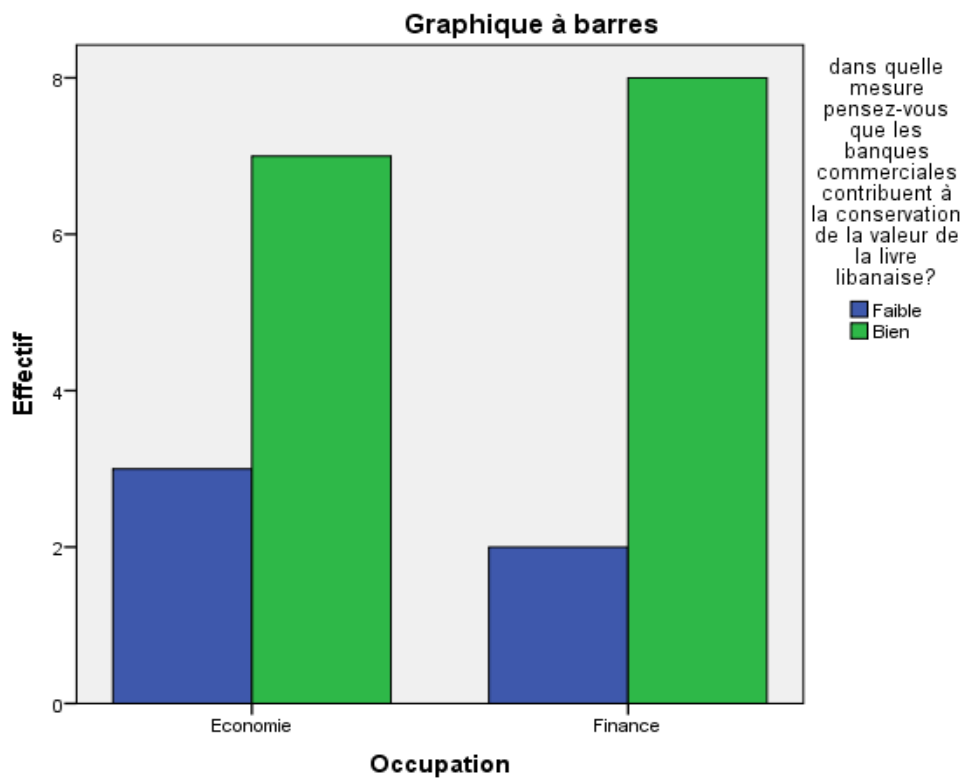


Tableau croisé d'occupation:

Dans quelle mesure pensez-vous que les banques commerciales contribuent à la conservation de la valeur de la livre libanaise?				
% dans Occupation				
		dans quelle mesure pensez-vous que les banques commerciales contribuent à la conservation de la valeur de la livre libanaise?		Total
		Faible	Bien	
Occupation	Economie	30.0%	70.0%	100.0%
	Finance	20.0%	80.0%	100.0%
Total		25.0%	75.0%	100.0%



Test de khi-deux appliqué sur la question 3:

H0: l'occupation n'a pas d'impact sur la réponse a Q₃

Deux variables qualitatives et $n < 30 \Rightarrow$ Fisher exact

Tests du khi-deux						
	Valeur	ddl	Signification asymptotique (bilatérale)	Sig. exacte (bilatérale)	Sig. exacte (unilatérale)	Point de probabilité :
khi-deux de Pearson	1.333 ^a	4	.856	1.000		
Rapport de vraisemblance	1.726	4	.786	1.000		
Test exact de Fisher	1.631			1.000		
Association linéaire par linéaire	.655 ^b	1	.418	.553	.277	.117
N d'observations valides	20					

p-value $> 0.05 \Rightarrow$ on ne rejette pas $H_0 \Rightarrow$ l'occupation n'a pas d'impact sur la réponse à Q_3

9 Conclusion

Enfin, j'arrive à la fin de cette recherche et dispose de suffisamment d'informations pour répondre aux hypothèses grâce aux informations obtenues dans la première section et au formulaire.

Les économistes et les financiers s'accordent pour dire que la Banque du Liban joue un rôle primordial dans le maintien de la stabilité au Liban, ce que confirment les efforts déployés par le gouverneur de la Banque du Liban au début de 2019 pour apaiser les marchés financier et monétaire.

J'ai également constaté qu'une grande partie des Libanais utilisaient la lire, et non les autres monnaies, comme monnaie de leurs comptes bancaires et de leurs transactions, entre autres, ce qui renforce et renforce la livre libanaise et fait sa part.

Bien entendu, le secteur bancaire joue un rôle important dans le maintien de la livre libanaise tout en donnant les meilleurs économistes aux politiques économiques et monétaires.

Il était clair que le taux d'intérêt était une différence entre élevé et acceptable, les Malaisiens estimant que le taux d'intérêt était normal alors que les économistes le considéraient comme inacceptable et devraient être réexaminés.

Ils ont également qualifié la présence syrienne de fardeau économique et financier pour le Liban, son économie et ses finances.

Comme tout le monde a souligné que le taux de change ne va pas s'effondrer dans un proche avenir et j'insiste sur le fait que le taux de change est stable et n'atterrira pas de près ni de loin.

Enfin, dans mon résumé de recherche, il est considéré que les facteurs d'influence sont purement monétaires, la Banque du Liban jouant un rôle plus important: les banques commerciales et la confiance des Libanais dans leur monnaie. Ici, je compte sur de nouveaux horizons pour développer et approfondir cette recherche. Quels sont les chiffres de la balance des paiements? Est-il affecté par les changements globaux et les bourses mondiales? Rôle de la bourse? Le rôle de tous les indicateurs pouvant être inclus dans mes analyses et études.

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Social Effect of Tax Benefits in Mountainous Regions

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Abstract: *The research is carried out within the framework of Targeted Scientific Research Project of Batumi Shota Rustaveli State University “Impact of Internal Migration on Some Economic Parameters of the Autonomous Republic of Adjara” (on the example of Khulo municipality).*

Key words: *Demography, Tax Benefits, Migration...*

JEL codes: *F02*

1. Introduction:

Internal migration is an important demographic process that negatively affects a country's demographic balance. It can be both voluntary and forced. In the first case, the migration of people from the village to the city is due to socio-economic reasons. In the second case, people are forced to leave their homes and move during natural disasters and conflicts (eco-migrants and displaced persons). The problem can be considered in a regional context and highlight a number of trends that are relevant for the Autonomous Republic of Adjara. The reduction of the population of regions is importance for ensuring demographic security, both for using the potential of economic development and for the population in the regions adjacent to the state border. Since the internal migration flows are large, this can lead to an increase in labor flows from the regions. In addition, in the case of vulnerable groups, such as displaced persons and eco-migrants who live in different municipalities, additional problems arise in terms of integration resettlement. According to experts, the control of internal migration processes was practically destroyed in the post-Soviet period. The movement of the population within the country is no longer controlled; accordingly, the issue is less studied in the scientific direction. Management of internal population flows caused by armed conflict, socio-economic and environmental problems requires more attention from the state. It is especially important to develop and implement policies that encourage the use of accumulated human and financial resources for sustainable development, which will allow local residents to stay in their places of residence. This will affect not only urbanization / emigration trends, but also general macroeconomic indicators, income levels and living standards.

For a country's demographic balance, the demographic process is the most important – the internal migration, during which residents voluntarily or forcibly leave their homes and move to a new place. The main reasons for voluntary migration are improved social and economic conditions as well as better education, and in case of forced migration people are forced to leave their homes in the event of natural disasters and conflicts (eco-migrants and internally displaced persons).

These trends may lead to a depopulation of the rural population - a gradual drain of so-called intelligence, which is likely to be driven by the migration of the more motivated and educated part of the population from the villages and small towns to the big cities. Stopping the downward trend in the number of populations in the regions is crucial to ensuring demographic security - both to exploit the potential for economic development in the regions and to maintain population in the areas adjacent to the state border. As the internal migration flows are large, they are expected to increase. This could lead to more outflows of workers from the regions.

The reasons for the external and internal migration processes are mainly economic factors, therefore, it is important to analyze them in the context of the broader social and economic development of the country. The management of population movements within the country caused by armed conflicts, socio-economic and environmental causes needs more attention. It is especially important to develop and implement policies that encourage the usage of sustainable economic environment for creating human and financial resources accumulated as a result of migration, which will enable local residents to stay in their places of residence and will affect urbanization / emigration trends.

In recent years, a lot of people have come from rural to urban areas, which is related to the low income from agriculture. In order to meet the needs of the family, to receive an education, they do not have to pay for land, so economically active members of the family come from the countryside to the city in search of suitable employment. Thereby competing with the local labor market. The reason for moving from village to town may also be a family split. It is well known that the highlands of Adjara have long been characterized by high birth rates (three or more children) and homesteads are often insufficient for family distribution, so moving from village to town for this reason is quite frequent. At various times, surveys by different private foundations have revealed that the main area of activity of Khulo population is agriculture, the population is mainly occupied with livestock and different cultures. However, due to the lack of sufficient financial resources, they find it difficult to sell the crops, so they mainly produce agricultural products for their own consumption. It should also be noted that “50.9% of the population of Khulo receives only a subsistence income from agriculture, and the share of households that easily meet their needs is very small, 1.6%.” (Social,.. 2016). Therefore, the motive for migration is high, if we add the danger of ecological disasters, the reasons for emptying the villages are serious enough.

In view of these problems, the Parliament of Georgia adopted the Law on the Development of Highland Regions on July 16, 2015. The purpose of this law is to identify benefits for stimulating the socio-economic progress of the mountainous regions, which will ensure the well-being of people living in the mountainous regions, raising their living standards, promoting employment, improving their social and economic status. The law provides for the following social benefits: supplement to pension, 20% of the pension provided by law, a supplement is appointed for those employed in the medical institution who receive remuneration from the state budget, who are paid from the state budget – double amount of the state pension for doctors, the state pension for nurses, providing heating for 6 months a year, also pay 50% of the monthly electricity bill (not exceeding 100 kWh). The Social Assistance category also includes monthly allowances for first and second children in the amount of GEL 100 for one year, and for the second and next child in the amount of GEL 200 for two years. 35% of the supplement to the salary is given to teachers employed in the public schools of the mountainous regions and 50% of supplement is paid to teachers employed in the special education program. As for tax exemptions, a person permanently residing in the Highlands is entitled to income and property tax exemptions under the Tax Code. In addition, an entrepreneur who is granted the status of a high-mountain settlement enterprise in accordance with the legislation of Georgia shall be exempt from taxes for the term and in accordance with the Tax Code of Georgia. (10 years after granting a status).

The economic effects of this law are not yet known even on the fourth year after the "Mountain Law" came into force. According to the information obtained, research is mainly concerned with obtaining social benefits, but it is difficult to talk in terms of stopping economic impact and stopping internal migration which is the subject of our next study. Although emptying the villages has always been the subject of debate and has been the issue of the agenda – in demographic and economic terms, despite government

intervention, people from highland areas still flow to the city every year, and this process seems almost impossible.

The object of our research is Khulo, one of the highlands of Adjara, Georgia, and we have obtained information from the Census Bureau based on the 2014 census. Population is divided into three age groups: 0-17 age group, 18-64 years-old and over 65 years of age group. As it turns out, 18-64 age group, i.e. working asset, prevails in the general population, however, because of lack of jobs, this category comes from the village to the city. Most of the migrants throughout Georgia are settled in Adjara, followed by Kvemo Kartli, Guria, Samtskhe-Javakheti. As for the Autonomous Republic of Adjara, the biggest number comes here. Batumi, then Kobuleti, Khelvachauri, Shuakhevi and Keda. In our research we identified two target groups and sought to find out the economic situation of each after the migration. The first group - internally displaced persons, ie eco-migrants, and the second group - voluntarily displaced persons. In the framework of the survey we applied to Khulo Municipality and the Ministry of Health and Social Affairs of the Autonomous Republic of Adjara. We asked for information about eco-migrants. A total of 111 eco-migrant families have left the Khulo municipality in 2016-2019. Each family received material assistance or was provided with a living space. The Government of the Autonomous Republic of Adjara aids eco-migrant families in three areas:

1. “The program of providing eco-migrants with safe housing” of the Ministry of Health Care, which provides GEL 25,000 in financial support for the purchase of safe homes.
2. Providing financial support for the construction of dwellings on geologically sustainable land area owned by eco-migrants.
3. Distribution of living spaces in social houses.

As we can see, the satisfaction of IDPs is really a matter of government care, the ways in which assistance is differentiated, but whether they are able to adapt socially, economically, psychologically to the new housing area and whether they have migrated to the country and the region in the long run is a positive outcome for the region. Given the current difficult economic conditions, it is difficult to say, so we consider it important to continue our research in this direction.

The second target group of our study is people who voluntarily leave the village, the main reasons for leaving their village are unchanged, though a small number of respondents do not rule out returning. Most of them are satisfied with internal migration and do not see the need to emigrate in the short term. It should be noted that rural-to-urban populations who do not compete in the local labor market for various qualifications go to work in another region of Georgia or move to a neighboring republic for a short period in Turkey.

In order to investigate the social effects of tax benefits, local residents of Khulo were surveyed. The study was conducted in June - September. The result is the following: The majority of respondents are 31-40 years-old (24%), followed by 51-65 years-old (21%). Then 41-50 years (20%), 26-30 years and over 65 (11% -11%), young people 16-20 years (4%). Both sexes were interviewed, most of them male (75%), female (25%), most of the respondents were married (80%).

The number of family members is also interesting: most of their families consist of more than 5 members (40%), 5-member families (23%), 4-member families (15%), 3-member families (12%), 2-member families (8%). As for education, the majority of respondents have general secondary education (63%), vocational (11%), higher education (23%). Most of the respondents by profession have no profession (52%), lawyer (18%), engineer (17%), teacher (9%), doctor (2%).

Figure 1. Source: Survey materials

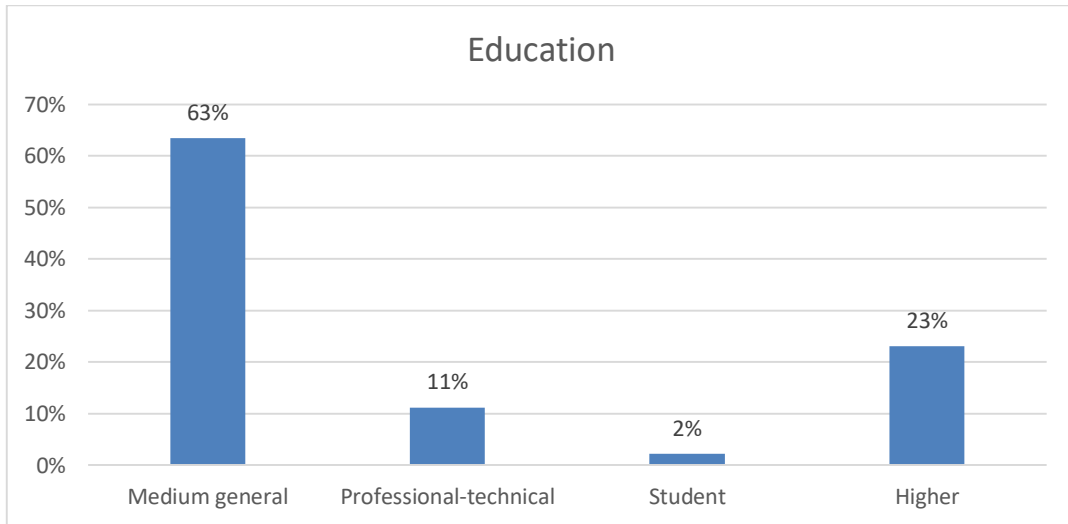
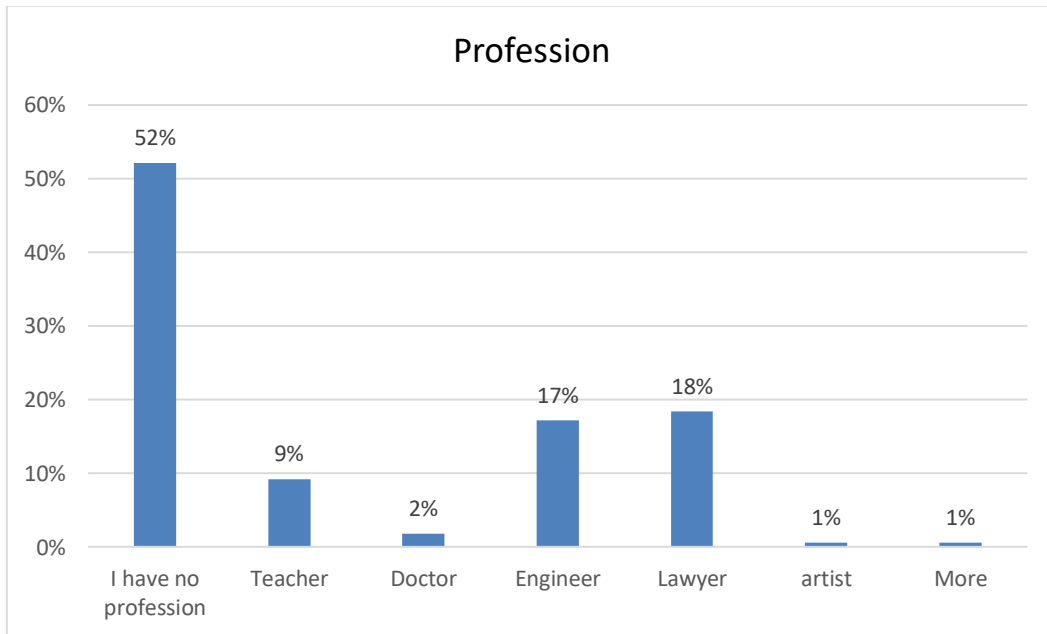


Figure 2. Source: Survey materials



One of our tasks was to study the validity of a so-called the “Mountain Law”, the examination of whether the population is aware of this law, whether they enjoy the benefits of the law, how they evaluate the operation of the law, whether this law is one of the conditions for improving their economic situation and a contributing factor to population growth. The analysis of the results showed that the overwhelming majority of the population is well aware of the Mountain Law (98%) and not (2%). This law provides

for various types of social benefits (utilities, pensions, wages, child benefits) for the population at large (61%), and 100% of respondents enjoy communal benefits.

Figure 3. Source: Survey materials

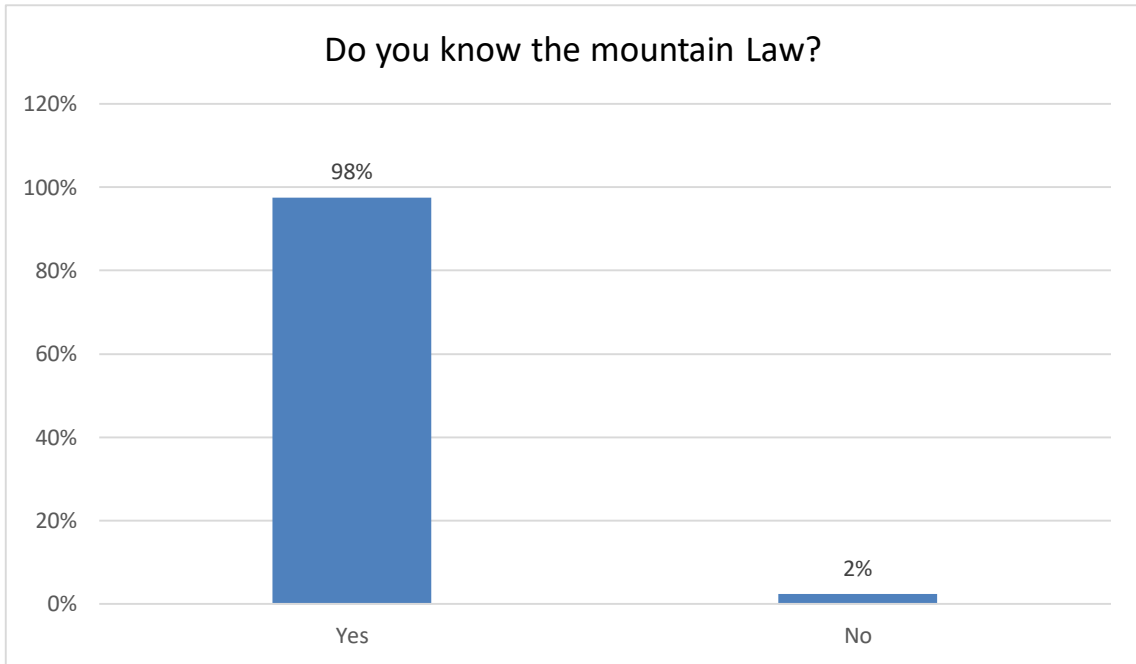
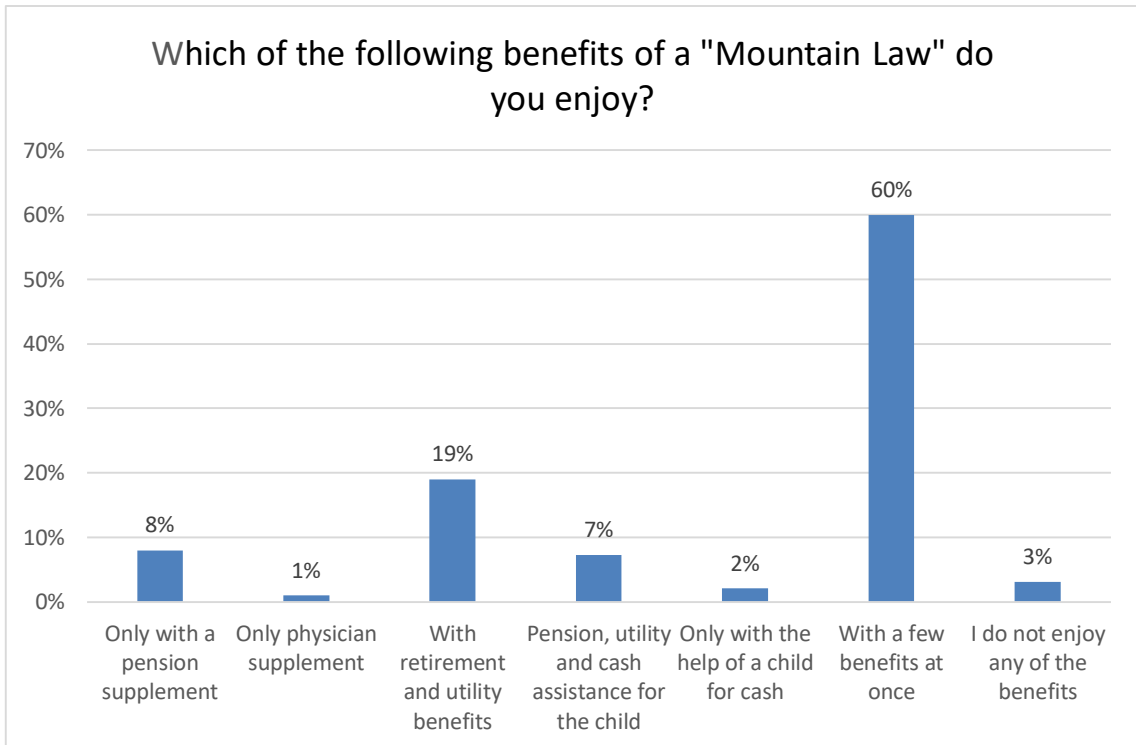
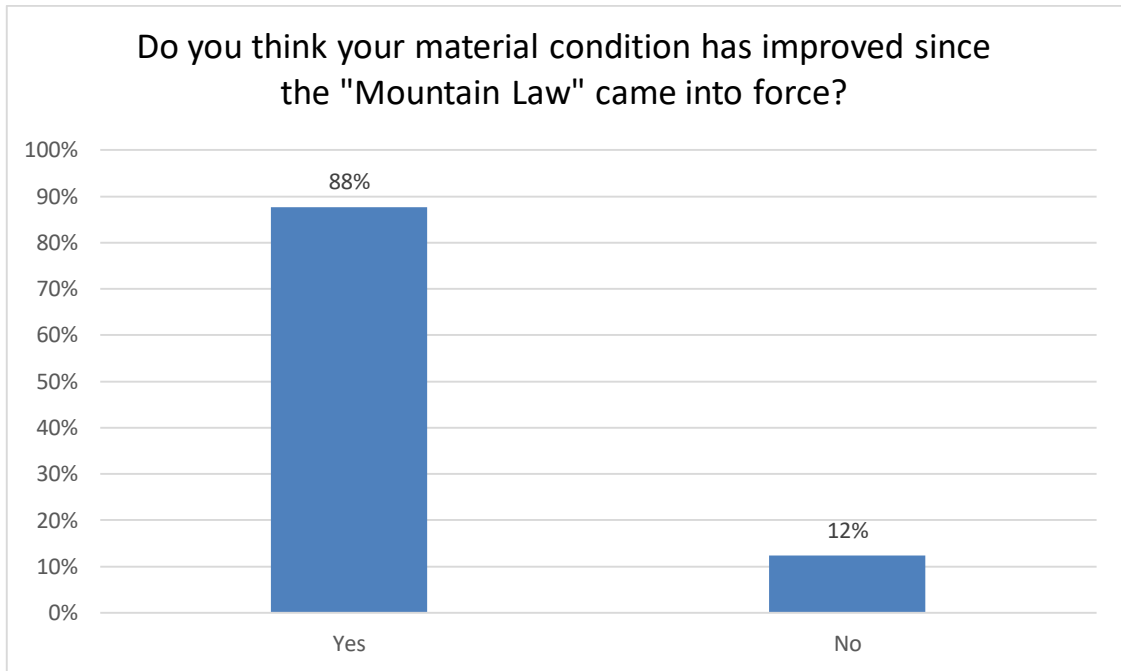


Figure 4. Source: Survey materials



Most of the respondents positively assess the law and believe that their material situation has improved since the enactment of this law (88%), with only a small number believing that this law does not change anything (12%).

Figure 5. Source: Survey materials



According to the survey, also as a result of the interviews taken at the site, it can be said that the tax losses are negligible compared to the social and economic effects, moreover, it can be assumed that the long-term social and economic effects will exceed tax losses, because this law creates income on the spot, improves the material condition of the population, which in turn will improve the socio-economic conditions of the population, and in this case, the state will reduce the budgetary expense it has in the form of other social insurance or assistance.

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Understanding economy and society from the perspective of two outstanding thinkers of the turn of 20th and 21st century: János Kornai and Xavier Richet

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Abstract: *Both scholars, outstanding thinkers of the last fifty years, contributed greatly to the understanding and explaining the nature of the economic phenomena occurring in the contemporary highly developed capitalist countries.*

János Kornai (until 1945 known under the surname of Kornhauser) is an outstanding expert on contemporary economy and Xavier Richet broadens and deepens the theory of the international economic relations. The scope of research of both scholars are complementary to each other and thus the topic of the paper. The paper focuses on scrutinizing how the theoretical-comparative analysis of economic systems of János Kornai and the theoretical-empirical approach of Xavier Richet enrich the European economic thought of the 20th and 21st century.

János Kornai presents his views with relations to some aspects of sociology, political philosophy and ethics. Kornai is known for being the coauthor (together with Tamás Lipták) of the article published in “Econometrica” journal in 1962, cf: János Kornai, Tamás Lipták: A Mathematical Investigation of Some Economic Effect of Profit Sharing in Socialist Firms. “Econometrica” 1962, No. 30 (1), pp. 140-161. Edmond Malinvaud, a French co-editor of the journal, accepted the article as written in the language of modern economy.

Key words: János Kornai, Xavier Richet, Thomas Lipták, economic system, paradigm, profit, state, rationality, China, the Silk Road, anti-equilibrium

JEL Classification: B15, B31

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I. Economic views of János Kornai

János Kornai defended his doctoral dissertation on the subject: "Excessive centralisation Overdecentralization in Economic Administration", which has been published by the European Commission's Directorate-General for Economic and Social Policy, and which is based on an experiment in Hungarian light industry. Oxford University Press in 1959. By publishing this work, Kornai became a part of the trend of publications in Western Europe, such as: Administration Behavior, a story of decision processes in business organization (1947) by Herbert Simon, or The Nature of the Firm (1937) by Ronald Coase.

János Kornai introduced economic categories into the theory of socialist economics, such as the realm and the regulatory zone, pressure and suction, the economy of shortage and the mild and severe budgetary constraints. These issues have been put forward in a new way to address a number of issues related to the development and functioning mechanism of the economy¹ that are not sufficiently clear. The analysis of some price theories from the point of view of the proportions occurring in the process of extended reproduction should also be treated as very original and formulate "two-channel" prices as a result of this concept².

It is a matter of great importance to define the economic role of the state. As János Kornai points out, the myth that the categories and criteria of the monetary economy and the competitive pricing mechanism were sufficient to solve the problems of economic practice must be decisively rejected. This does not mean rejecting the logic of the market economic order, but only a primitive interpretation of the meaning of this logic.

János Kornai's scientific achievements draw attention to what is sustainable from the point of view of the theory of economy during the transformation period, as well as to what is variable in the process of economic development. This is what Kornai's big contribution to the science of economics is all about.

As we know, the content of the management process expresses the aspiration to the functioning of the economic role of the state within the framework of the market mechanism. As a result, in the place of the economy, there is a shortage with a mild budget restriction, which is based in particular on in the sphere of investment with non-price signals, a limited economy

¹ Kornai János: *Anti-Equilibrium : teoria systemów gospodarczych : kierunki badań* [Anti-equilibrium, z oryginału w języku angielskim tłumaczyli Janusz Beksiak, Urszula Libura i Zofia Wiankowska]. Państwowe Wydawnictwo Naukowe (1951-1992). Warszawa 1973, ss. 519.

² Kornai János: *Niedobór w gospodarce* [Economics of Shortage, przeł. (z ang.) Urszula Grzelońska i Zofia Wiankowska]. Państwowe Wydawnictwo Ekonomiczne, Warszawa 1985, ss. 822.

started to develop by demand. It is an economy guided by a price signal, with all the consequences this entails³.

At the same time, the question of making the economy more marketable began to be addressed not only in the goods and services market, but also in the labour and capital markets.

According to Kornai, the greatest economic dilemmas are connected with the problem of economic growth and the underlying investments. This is a fundamental change in relation to the past. The basic criterion of the investment process should be the prospectively determined demand, including the demand on world markets. The main burden of the issue has shifted - in accordance with the adopted system assumptions: from the state's activities to the activities of companies. This results in a change in the directions of investment and the nature of growth. It has expanded and gained a different character in comparison with the previous period, the financial problems, namely. The passive role of money was transformed into its active role, the new position of the Central Bank. A network of commercial banks was created, there was a budget deficit of a permanent nature (for example, in relation to Poland), the stock exchange started to function.

All this together, in Kornai's opinion, should be considered and evaluated from the point of view of long-term economic development needs, because it is expressed in the following terms in analyses and actions, the basic criterion of rationality. The market as an institution, apart from its many undoubtedly advantages, which no rational economy can do without, also has many disadvantages, which must be taken into account. The main point is that it causes a stratification of the following in its actions and the polarisation of society in every sphere and in every field, and therefore also at international level.

When presenting the transformation programme in Hungary at the beginning of the 1990s, Kornai analysed the results of the transformation, i.e. its achievements and shortcomings⁴.

Kornai states the following:

- it has been observed that with the progress of restructuring, the share of industry in global output is decreasing and the share of services is increasing,
- the greater the share of the private sector in production, the more difficult it is to collect taxes,

³ Kornai János: *Niedobór w gospodarce* [Economics of Shortage, przeł. (z ang.) Urszula Grzełowska i Zofia Wiankowska]. Państwowe Wydawnictwo Ekonomiczne, Warszawa 1985, s. 455 i następne.

⁴ Kornai János: *Przemiany posocjalistyczne i państwo: refleksje na tle węgierskich problemów finansowych*. „Gospodarka Narodowa” 1993, nr 3, s. 1.

- the more effective the ownership changes are, the greater the risk of budgetary problems,
- the transition period entails a specific financial trap when macroeconomic stabilisation is achieved, other important problems such as tensions in public spending and the danger of budget deficits continue to arise.

Kornai states that "rapid and certain solutions can only be proposed by economic dilettants or political fraudsters"⁵.

II. The role of the state in the economy and coordination mechanisms according to János Kornai

János Kornai's scientific output is marked by a book entitled *The Road to a Free Market Economy*. It has been translated into sixteen foreign languages. The reader's attention will continue for a short time in the book entitled *The Socialist System* (1992). This book, in turn, should be read in English. It presents the way contemporary economies operate due to the specificity of coordinating mechanisms of action. Kornai called the first mechanism bureaucratic coordination. It means is a hierarchical vertical relationship between superiors and subordinates. Instructions and commands are signals sent from the top down the desk of a bureaucratic structure. Collaboration is characterized by loyalty to superiors and fear of punishment. The second coordination mechanism is the market. It is a horizontal relationship between sellers and buyers. The main signals are prices. Material profit is the motivation. The third coordination mechanism is called associative coordination. It is a horizontal relationship. The personification of this coordination is self-government or civil society. These types of coordination exist in all societies, but their intensity varies from one period to the next⁶.

Kornai conducted an analysis of state institutions and their role in the economy in a different way than is generally done, specifying a misunderstanding of state institutions. He did, that it notes, as it travels the world, that excessive admiration for institutions is cultivated

⁵ Kornai János: *Przemiany posocjalistyczne i państwo: refleksje na tle węgierskich problemów finansowych*. „Gospodarka Narodowa” 1993, nr 3, s. 1.

⁶ Kornai János: *The Role of the State in a Post-Socialist Economy*, Warsaw 2002 : Leon Koźmiński Academy of Entrepreneurship and Management, p. 6.

the state. He considered the views cultivated by the liberal Chicago school to be exceptionally puristic. Economists at this University take a position negating the necessity of the state in the economy. Kornai speaks about this scientific community in this way: "The purist approach from Chicago is rather unique. It has several limitations"⁷.

III. Professor János Kornai PhD in *Honoris Causa* at the Cracow University of Economics, Poland. June 19, 2008

Professor János Kornai, a well-known Hungarian economist, received an honorary doctorate from the Cracow University of Economics. The award ceremony took place on 19 June 2008 in Krakow. János Kornai is a Harvard professor, researcher and insightful observer of economic life. Kornai contributed to the preparation of the theoretical transformation of the socialist economy and was an active participant in debates on the transition to a market economy. Kornai has devoted many efforts to understanding the key problems of the transformation period, i.e. privatization, macro-stabilization and welfare state reforms.

Professor Marek Belka in a review of Professor Kornai's scientific output stated that "(...) Kornai's greatest achievement is that his concept and concepts: buyer market, seller market, soft budget constraint, shortage economy and many others, entered so deeply into our thinking that no one would ever think to support himself with quotations from his work. Like Mr. Jourdain of Moliere, who spoke prose, to him very often, without thinking about it, we say Kornai"⁸.

Professor Jerzy Hausner emphasized in his laudation that "Professor János Kornai with his works, analyses and theoretical concepts had a huge impact on the understanding of the systemic weaknesses of the socialist economy and contributed significantly to its transformation"⁹.

The winner of the *Honoris Causa* award himself spoke in his lecture titled *Dole i niedole badacza / The Dole and the Pain of the Researcher*: "If young researchers are afraid of the torments associated with a researcher's career, they should leave terra. However, if they are

⁷ Kornai János: *The Role of the State in a Post-Socialist Economy*. Distinguished Lectures Series n. 6. Warsaw, 16 November 2001, p. 6.

⁸ Professor János Kornai PhD in *Honoris Causa* at the Cracow University of Economics, Poland. June 19, 2008. <https://uek.krakow.pl> [Access: 15.11.2019].

⁹ Idem.

prepared for such a career, they should take into account the misfortunes and great, special and incomparable feelings of joy that a researcher's career brings. Believe me, it is worth the effort”¹⁰.

János Kornai served as President of the Econometric Society, President of the European Economic Association and President of the International Economic Association. He is a member of the Hungarian Academy of Sciences and five other academies. In recognition of his scientific achievements, he received the highest Hungarian awards. He is a recipient of foreign awards, including the Seidman's Award in the USA, the Humboldt Award in Germany and the Order of the Legion of Honour in Germany.

IV. János Kornai's participation in disputes and discussions on the economy of the breakthrough of the 20th and 21st centuries

One of János Kornai's famous books is *Dynamism, Rivalry, and the Surplus Economy. Two Essays on the Nature of Capitalism*, which appeared in the Polish edition (*Dynamism, rivalry and excess economy. Two essays on the nature of capitalism*), is a development of the issues permanently present in Kornai's work. The author compares economic systems, their efficiency and ability to modernize. It is known that the economy of shortage in the sense of János Kornai is a system in which shortages occur in a common way. There may be surpluses in it, but they are transient. The economy of excess is a mirror reflection of the economy of shortage. This basic thesis defended by Kornai is accompanied by two other important observations. The first is that there is no choice between the economic state of equilibrium and the state of imbalance; we are doomed to choose between different states of imbalance; the second, innovation, is a feature of excess and is disappearing in the economy of shortage. These claims are crucial, according to Kornai, precisely now that the fundamental principles of the market economy are under discussion. It is important to stress that Kornai does not prove that the capitalist economy has only advantages. It describes its weaknesses, for example the inability to make full use of labour resources and production capacity. He considers, however, that these weaknesses cannot be eliminated without undermining the positive characteristics of an economy of this type and undermining its innovation and dynamism.

¹⁰ Idem.

However, according to Roger Edward Backhouse, "In order to achieve a sufficient concentration of ownership to make management accountable to shareholders without creating great inequalities, shares should be distributed among investment funds in which all citizens would be involved. Economists such as the Hungarian János Kornai, who claimed that the State should carefully take good care of their assets until they are sold to a new middle class at a real market price, are deemed to be misguided. No government could afford to implement a stabilisation programme that would impose difficulties for more than a short period of time: voters would accept a short period of sacrifice, provided they were sure that it would not last long. The pace of privatization was extremely important: speed and scale are much more important than, for example, privatization revenues"¹¹.

An important role in János Kornai's latest work is played by an article entitled *The System Paradigm Revisited: Clarification and Additions in the Light of Experiences in the Post-Socialist Region* [(Acta Oeconomica 2016, 66 (4), part I, II, III)]. It was published in Polish under the title *Revised system paradigm. Explanations and additional elements in the light of the experiences of the post-socialist state*.

The author of this paper meets the interests of researchers dealing with comparative economics, comparative political science and sociology and contemporary historians, highly qualified employees in financial institutions, international organizations who analyze and are deeply convinced of their importance changes taking place in post-socialist countries.

The author emphasizes that he uses the opposition of economic categories: capitalism versus socialism in a descriptive and positive sense. These terms have already appeared among others in the ideas of Pierre-Joseph Proudhon and socialism in the works of Henri de Saint-Simon. The term capitalism was disseminated through Marx's main work, *Capital* (Volume I, Volume II, Volume III). They were also used by numerous critics of socialism, such as Ludwig von Mises and Joseph Schumpeter. At present, they are constantly recurring in the statements. It is extremely interesting how Kornai explains the reasons for the infrequent use of the term "capitalism" in modern times. He writes the following: "There are several reasons for avoiding the term "capitalism". Former communists feel ashamed that their activity has now resulted in capitalism. German economic politicians after World War II, sensing the anti-capitalist

¹¹ Backhouse Roger Edward: *The Puzzle of Modern Economics. Science or Ideology?* University of Birmingham and Erasmus University Rotterdam. Cambridge, Cambridge University Press 2010, p 41. Zainteresowanie dokonaniai naukowymi Kornai`a przejawia od dawna Paul Anthony Samuelson. Patrz na przykład : Paul Anthony Samuelson: *For Plan to Reform Socializm, Listen to János Kornai*. "Christian Science Monitor", 4 April 1990, p. 7.

sentiment among a large number of voters, decided that it would be sensible to give the deserved system a new name: the social market economy. Conservative populists are also reluctant to call their actions an institutional effect, capitalism, because they would prefer to be seen as opponents of doing business for profit, opponents of banks and capitalism”¹².

Kornai uses the term paradigm in the sense of Thomas Samuel Kuhn to modify it accordingly: he speaks of a systemic paradigm by specifying the main and side features. This is how the revised system paradigm came into being. Kornai uses the term 'great system' to replace the earlier scientific term 'production method'. He built two theoretical constructs that he called types and equipped them with features that distinguish two types from each other and show what is common to many individual processes in each country of the same type.

Kornai's observation that national statistics on ownership transformations are highly incomplete and sporadically performed is valuable. He says that "nowhere do national statistics calculate and publish data on production volume according to the criterion of ownership or share of total output sold at prices set administratively. It is surprising that only non-governmental institutions in a small group of countries deal with ownership relations and radical transformation of coordination mechanisms, although these are basic requirements for system change. Prestigious international organisations regularly publish comparative data on production, international exchange and finance, but in my opinion they do not pay sufficient attention to ownership transformation and the importance of bureaucratic and market coordination”¹³.

Kornai, as an insightful researcher, rightly pointed out that statistics omits the most important economic criterion, i.e. the ownership criterion. Publicity is not entirely in line with the interests of the owners. We are talking about private and capitalist ownership. This is how János Kornai's important thought can be recapitulated.

Jacek Tittenbrun, a well-known Polish sociologist and professor at Adam Mickiewicz University in Poznań, has devoted many of his publications on ownership relations and their importance in the process of system transformation in his books to his several-volume book Z

¹² Kornai János: *Zrewidowany paradygmat systemowy. Wyjaśnienia i dodatkowe elementy w świetle doświadczeń państwa postsocjalistycznych*. „Zarządzanie Publiczne” 2017, No 3 (41). Uniwersytet Ekonomiczny w Krakowie, Wydawnictwo Naukowe SCHOLAR, s. 9-10.

¹³ Kornai János: *Zrewidowany paradygmat systemowy. Wyjaśnienia i dodatkowe elementy w świetle doświadczeń państwa postsocjalistycznych*. „Zarządzanie Publiczne” 2017, No 3 (41). Uniwersytet Ekonomiczny w Krakowie, Wydawnictwo Naukowe SCHOLAR, s. 15.

deszczu pod rynnę: studium polskiej prywatyzacji, (4) tomes I, II, III, IV, Zysk i S-ka Publishing House, Poznań 2007.

János Kornai presents his reflections on certain aspects of sociology, political philosophy and ethics. Kornai is known for co-authored an article written with Tamás Lipták in the journal *Econometrica* in 1962, see János Kornai, Tamás Lipták: A mathematical Investigation of Some Economic Effect of Profit Sharing in Socialist Firms. "Econometrica" 1962, No. 30 (1), pp. 140-161. Edmond Malinvaud, the French co-publisher of the journal, accepted the article for publication as written in the language of modern economics.

In an article by J. Kornai, T. Liptak: Two-level Planning, *Econometrica*, a method was used which breaks down large problems of linear optimisation into sub-problems. This distribution simplifies and solves the general problem of coordinating economic decisions so that decentralised economic operators can achieve the global optimum - see János Kornai, Thomas Liptak: Two-level Planning, "Econometrica", 1965, Vol. 33, No. 1, pp. 141-169. Published by: "The Econometric Society".

Following the publication of Thomas Piketty's book *Capital in the 21st Century*, Paris 2013, a handful of comments on the book were presented by János Kornai in a study entitled János Kornai: *What is Capital in the 21st Century?*

Also Grażyna Musiał in co-authored with Mirosław Lubszczyk are the authors of a text entitled: *Thomas Piketty on the problem of capital in the 21st century [W:] Discussions on capital yesterday and today*, Scientific Editorial Grażyna Musiał. Scientific work. Publishing house of the University of Economics in Katowice. Katowice 2019, pp. 83-98.

Kornai addresses the following problems: the development of productive forces and technical progress, the dimensions of inequality and the source of wealth, ways of obtaining large wealth, inheritance of wealth, types of motivation, contradictions, dilemmas and action plans, predecessors in the history of economic thought. The task that Piketty set for himself is to describe and explain the relations prevailing in the sphere of division. Kornai extended the context of the analysis and included other areas of the process of social reproduction in the scope of the study. In his book, Piketty appealed for "the restoration of the question of division of its proper place in the centre of economic debate". Kornai further explains that he deliberately uses Marx's terminology (productive forces, production relations), since these expressions can easily be translated into the terminology used by other schools of economics.

As we know, in economics the problem of the laws of science that it discovers is important. Kornai argues that Marx in *Capital* does not use the expressions "fundamental right" or "fundamental a contradiction". According to him, these terms derive from the teaching of political economy aimed at the interpretation of the content of the *Capital*. Kornai reports that Debraj Ray has criticized the concept of the "fundamental right" as formulated by Piketty¹⁴.

Kornai notes that in Piketty's book *Capital in the 21st century* appears in the index of names and surnames only once Hayek's name, and in general he does not use Piketty with the huge contribution he made to the science of economics and to the theory of the development of capitalism in particular Joseph Alois Schumpeter.

The scientific output of János Kornai is very interesting in terms of its content. All the works are well written from the methodological point of view. Although the title does not contain the word methodology, in fact it is a theoretical and methodological study. They have the highest scientific status. The most important book publications of János Kornai are as follows: *Overcentralization in Economic Administration; Mathematical Planning of Structural Decisions; Anti-Equilibrium; Rush versus Harmonic Growth; Economics of Shortage; Growth, Shortage and Efficiency; Contradictions and Dilemmas; The Road to a Free Economy. Shifting from a Socialist System: The Example of Hungary; Vision and Reality, Market and State: New Studies on the Socialist Economy and Society; The Socialist System. The Political Economy of Communism; Highway and Byways. Studies on Socialist Reform and Postsocialist Transition; Struggle and Hope. Essays on Stabilization and Reform in a Post-Socialist Economy; Paying the Bill for Goulash-Communism; Welfare, Choice and Solidarity in Transition: Reforming the Health Sector in Eastern Europe; By Force of Thought. Irregular Memoirs of an Intellectual Journey; From Socialism to Capitalism; Dynamism, Rivalry and the Surplus Economy: Two Essays on the Nature of Capitalism.*

V. Research problems undertaken by M. Xavier Richet

M. Xavier Richet is interested in international economic relations, globalization and regionalization¹⁵ of the world economy, economic problems of the Chinese economy.

¹⁴ Debraj Ray (2015). Nit-Piketty: *A comment on Thomas Piketty's Capital in the Twenty First Century*. CESifo Forum, 16 (1), 19–25, <http://www.cesifo-group.de/DocDL/forum1-15-focus3.pdf>.

¹⁵ An in-depth analysis of socio-economic processes in Europe in discussions conducted from the point of view of the history of economic thought is contained in the publication by Nikolay Nenovsky. Nikolay Nenovsky: *Economic Discussions at the European Periphery. Bulgarian Economists During the Great Depression* .

One of the main factors contributing to the globalization of economic life is foreign direct investment. These investments are the most visible effect of the progressive globalization of the world economy. Over the past thirty years the sectoral (industry) structure of foreign direct investments has undergone significant changes, these investments have been shifted from the raw materials sector; since the 1990s, over 50% of foreign direct investments have been transferred to the services sector. There has been an increase in the attractiveness of certain countries as places for allocation of foreign direct investments, in this number especially to China.

The concept of globalisation also means an increase in various types of connections between various entities of international life and mutual, most often asymmetrical impact in all spheres of society, from the internationalisation of markets and capital to finance and culture. There is a concentration of the activities of multinational companies. The majority of international corporations have their headquarters, i.e. they come from economically developed countries. Almost half of multinational and transnational corporations have their headquarters in five most economically developed countries, i.e. the USA, France, Japan, Germany, Great Britain. It should be noted that the value of international trade turnover equals only 2% of the value of international capital flow. Capital flows on a global scale are disconnected from actual investments and this poses a serious threat to the functioning of the modern world economy. The deformation of international financial transactions has so far progressed because it is not subject to regulation.

Xavier Richet's scientific work allows us to understand various aspects of economic life at local, regional and global level. One of Richet's earlier books was devoted to the issue of "the plan and the market"¹⁶, a topic which is famous in the theory of economics. This problem aroused great interest among economists in many countries, including Poland (Edward Łukawer, Włodzimierz Brus, Stanisław Gumułka). An example of Richet's interest in the

University of National and World Economy, Sofia LE STUDIUM, University of Orleans ICER, Torino, Orleans/Sofia, June/September 2010.

¹⁶ Richet Xavier: *Le modèle hongrois. Marché et plan en économie socialiste*. Presses Universitaires de Lyon (PUL), Lyon 1985, pp. 298. The review of this book was written by Krystyna Szymkiewicz. Szymkiewicz Krystyna: *Xavier Richet, Le modèle hongrois. Marché et plan en économie socialiste*. «Revue d'études comparatives Est-Ouest Année » 1986, vol. 17, n°1. pp. 144-145. See joint publication: János Kornai i Xavier Richet (éd.), *La voie hongroise. Analyses et expérimentations économiques*. Calmann-Lévy, Paris 1986, s. 319. The review of this book was written by Jacques Sapir. Sapir Jacques: János Kornai et Xavier Richet (éd.), *La voie hongroise. Analyses et expérimentations économiques*. «Annales. Économies, Sociétés, Civilisations » 1988. 43^e année, No. 1, 245 – 246.

problems of global regionalisation is to address the problems of the Maghreb countries from this perspective.

The dominant issue of Xavier Richet's scientific and research interests, which has come to the fore in recent years, is the issue of China's economy. The problems troubling this economy are studied by Richet in the context of innovation, management strategy, restructuring, employment, economic relations resulting from links with the European Union. Xavier Richet is a professor of economics at Sorbonne Nouvelle University of Paris. He is seconded at CNRS to the Hang Kong Contemporary China Study Centre. He conducts research on the development and strategies of Chinese industrial and financial groups, including analysis of factors stimulating their internationalisation and ways of competing with international companies in economically highly developed countries.

Below are some of the most important scientific publications of Xavier Richet in chronological terms. They are as follows:

The Hungarian Model, Cambridge, Cambridge University Press, 1989,

Les économies socialistes européennes. Crise et transition, Paris, Armand Colin, 1992

Economie de l'entreprise. Fondamentaux, Hachette, Col., 1994, 1996, 2001, 2006. Traduit et publication en russe, chinois, slovaque, vietnamien, albanais, bulgare.

La voie hongroise. Analyses et expérimentations économiques, édité avec Janos KORNAI, Paris, Calmann-Levy, 1986

Innovation et emploi, à l'Est et à l'Ouest. Les entreprises hongroises et françaises face à la modernisation (en collaboration), Paris, L'Harmattan, 1990

Grands problèmes économiques; Hachette-Supérieur, 1995

Reestructuración industrial en las economías en transición, (avec B. Bastida), Barcelona, Publicacions Universitat de Barcelona, 2000

Foreign Direct Investment in Central Eastern Europe : Case Studies of Firms in Transition (Microeconomics of Transition Economies) (avec Saul Estrin, et Josef C. Brada), 2000; N.Y, M.E.Sharp

Gouvernance, coopération et stratégie des firmes chinoises, (co-éditeur, avec Jean-François Huchet), L'Harmattan, Paris, 2005

Vers l'élargissement de l'Union européenne à l'Europe du Sud-Est (co-éditeur avec Michel Drouet), Presses universitaires de Rennes, Rennes, 2007

- Globalisation of Firms in China, India and Russia. Emergence of National Groups and Global Strategies of Firms* (avec Jean-François Huchet et Joël Ruet) (eds.) Academic Foundation, New Delhi, 2007
- China and the Global Crisis : A Comparison with the European Union*, (avec JP Cabestan et JF Di Miglio), Routledge, 2011
- Strategies of Multinational Corporations and Social Regulation* (ed. avec V Delteil et P. Dieuaide), Springer, 2014
- Chine, Inde: les firmes au coeur de l'émergence* (ed. avec J.-F. Huchet et J. Ruet), Rennes, PUR, 2015
- Western Balkans and the EU. Lessons from past enlargement, challenges to firther integrations* (ed. avec Vesselin Mintchev and Nikolay Nenovsky), Sofia, The University of National and World Economy, 2015
- Le Maghreb à l'épreuve de la mondialisation* (ed. avec N. Safir), Paris, L'Harmattan, 2016
- Les nouveaux territoires économiques. Acteurs et facteurs d'émergence.* (ed. avec Ph. Clerc et D. Guerraoui), Casablanca, La Croisée des chemins, 2017
- L'Europe. Approches géopolitique et économique*, (ed. avec J-P Chagnollaud) Paris, L'Harmattan, 2018

From this list it appears that Xavier Richet's empirical research covers regions such as the Balkans, the Maghreb, the post-Soviet area and the Chinese economy. Xavier Richet has conducted research at universities in 26 countries. He was the project manager for the BALKANINT project (2013-2016). is a member of the Belt and Road Initiative research network. He manages the programme: "Multidisciplinary views on European integration in the Western Balkans", "Maghreb Economy and Geopolitics:", programme: "Brazil, Russia, India, China (BRIC)".

Richet was awarded the title of Doctor Honoris Causa by Corvinus University of Budapest, Hungary and the Bulgarian Academy of Sciences for his scientific work.

VI. Xavier Richet's Empirical View on Changes in the Modern Economy

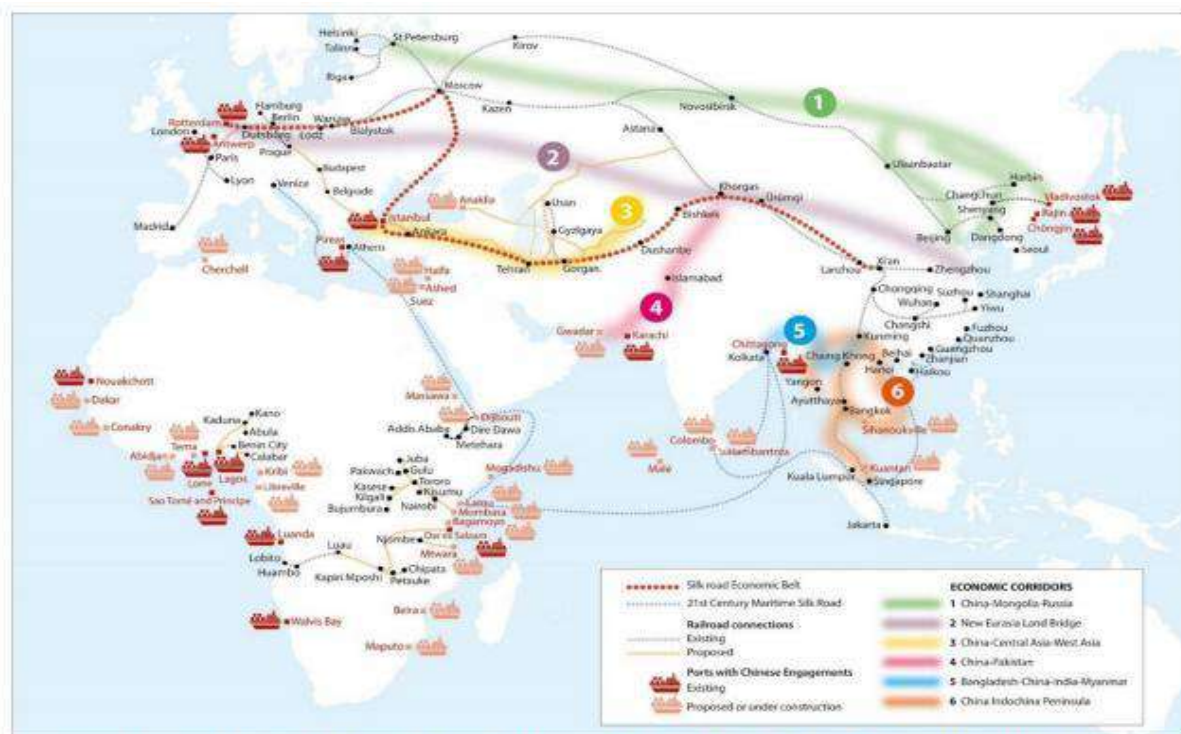
“One Belt One Road” is a project that fulfils the objectives of the Chinese development model. It lists 6 corridors in order to have an overview of where to locate infrastructure investments along these corridors.

1. New Eurasia Land Bridge: involving rail to Europe via Kazakhstan, Russia, Belarus, and Poland.
2. China, Mongolia, Russia Economic Corridor: including rail links and the steppe road – this will link with the land bridge.
3. China, Central Asia, West Asia Economic Corridor: linking to Kazakhstan, Kyrgyztan, Tajikistan, Uzbekistan, Turkmenistan, Iran, and Turkey.
4. China Indochina Peninsula Economic Corridor: Viet Nam, Thailand, Lao People’s Democratic Republic, Cambodia, Myanmar, and Malaysia.
5. China, Pakistan Economic Corridor: Xinjiang Province will be most affected.

This important project links Kashgar city (free economic zone) in landlocked Xinjiang with the Pakistan port of Gwadar, a deep water port used for commercial and military purposes.

6. China, Bangladesh, India, Myanmar Economic Corridor: This is likely to move more slowly due to mistrust over security issues between India and China

Ryc. 1. One (land) belt one (maritime) road



Source: OECD research from multiple sources, including: HKTDC, MERICS, Belt and Road Center, Foreign Policy, The Diplomat, Silk Routes, State Council Information Office of the People’s Republic of China, WWF Hong Kong (China).

Source: I quote from: : “China’s Belt and Road Initiative in the global trade, investment and finance landscape”. OECD BUSINESS AND FINANCE OUTLOOK 2018 © OECD 2018. <https://www.oecd.org/finance/Chinas-Belt-and-Road-Initiative-in-the-global-trade-investment-and-finance-landscape.pdf>. [Access: 15.11.2019.].

Ryc. 2: Road and sea routes



Source: Robert Walenciak: "There is no wall, there is the Silk Road. Przegląd" weekly June 20, 2016 [https://www.tygodnikprzeklad.pl/muru-jedwabny-szlak/ Access: 15.11.2019].

The following tables illustrate the state of foreign direct investment, Chinese direct investment, located in Europe. Table 1 illustrates investment in Piraeus (Greece), Table 2 in Spain and Table 3 in Portugal.

Tab. 1. COSCO investments in the Piraeus Port Authority

2009	COSCO invested in the port's infrastructure and has brought in other leading operators (Hewlett Packard, Maersk and the Mediterranean Shipping Company).
April 2016	COSCO gained the majority 51% stake of the Piraeus Port Authority for €350 million.
August 2016	COSCO increased its current acquisition to a 67% stake of the Piraeus Port Authority for a total €368.5 million.
2016-2025	COSCO will invest €350 million over the next decade to improve the port's facilities.

Source: Xieshu Wang, Joel Ruet, Xavier Richet: "One Belt One Road and the reconfiguration of China-EU relations, p.12. <https://hal.archives-ouvertes.fr/hal-01499020/document>. [Access 15.11.2019].

Tab. 2. Chinese investments in Spanish ports

	Chinese investor	Spanish ports	Investment amount
2012	Hutchison Port Holdings	Barcelona Europe South Terminal	€300 million
2014	Hutchison Port Holdings	Barcelona Europe South Terminal	€150 million
2016-2017	COSCO/China Merchants (potential investors)	The Port Authority of Valencia	€500 million

<https://hal.archives-ouvertes.fr/hal-01499020/document>. [Access 15.11.2019].

Tab. 3. Chinese investments in Portugal

	Chinese investor	Portuguese company	Shareholding
2011	China Three Gorges Corporations	Electricidade de Portugal (Portugal's public electrical power supply company)	21% stake
2012	State Grid Corporation of China	Rede Energética Nacional (Portugal's national electrical grid operator)	25% stake
2014	Fosun International	Caixa Seguros e Saude SGPS SA (Portugal's largest insurance group)	80% stake
2016	China Hainan Airlines	TAP Portugal (Portugal's national air carrier)	23% stake

Source: Xieshu Wang, Joel Ruet, Xavier Richet: One Belt One Road and the reconfiguration of China-EU relations, p.14.

<https://hal.archives-ouvertes.fr/hal-01499020/document>. [Access 15.11.2019].

Conclusion

The aim of this paper is to present the reasoning and conclusions of two economists with very high scientific achievements in the field of economics and international economic relations. Janos Kornai's theory of economics contains an analysis of economic systems and their comparison at many levels of cognition. In Xavier Richet's publications, on the other hand, international economic relations are very carefully examined at all nodal points. These include globalisation, regionalisation, internationalisation, restructuring, global governance, and detailed analysis of the economy of large China.

The achievements of both scholars are testimonies to the cognitive progress that is taking place in the economy of the 21st century.

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The Fiscal Union of the EU – Opportunities and Challenges

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Abstract: *The European Union is the most developed integration community in the world. One of its most important features is the common currency and the shared monetary policy. The euro's first decades were successful, but not without serious challenges, most importantly the economic and debt crisis. The threat to the stability of the common currency has revived the debate about the creation of a fiscal union to complement the monetary union. There are already some important features of a common fiscal policy on the European level, including the EU budget, the Stability and Growth Pact and the European Stability Mechanism. However, this institutional framework is considered insufficient as a tool for macroeconomic stabilization and for the mitigation of country-specific economic problems. On the one hand, a genuine fiscal union would require centralized policies on taxes and public expenditure and most Member States are not willing to renounce their sovereignty in these important fields. On the other hand, there is an increasing understanding that in future the common European currency could again be placed under considerable pressure without stronger fiscal policy coordination. This understanding is reflected in the project for the next Multiannual Financial Framework 2021-2027 which envisages the establishment of new mechanisms and funds for macroeconomic stabilization. Against this background, the paper is devoted to the possibility for creation of a fiscal union in the EU. The objective is to outline the current institutional and legislative setting as well as to analyze the prospects for further integration. The present paper is devoted to the fiscal union of the EU. The objective is to outline the current institutional setting from the point of as well as to analyze the prospects for further integration. The paper is structured as follows: the first part outlines the existing elements of a fiscal union in the EU; the second part presents the new mechanisms envisaged in the Multiannual Financial Framework 2021-2027 governance; the third part analyzes the advantages and shortcomings of a possible complete fiscal union; and the fourth part concludes.*

Key words: *Economic and Monetary union, fiscal union, European integration, fiscal policy coordination*

JEL codes: *E61, F15, F36*

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Introduction

The Economic and Monetary union of the EU comprises 19 countries which share a common currency and monetary policy but have different budgetary policies. When the euro was introduced a fiscal union was not on the political agenda in Europe. However, the economic, debt and banking crises gave impetus for deeper integration. There is increasing awareness that stronger coordination in fiscal policy is necessary to complement and enhance the monetary union. Several projects were proposed in recent years, including the creation of a separate euro area budget, an EU finance minister and a European monetary fund. However, Member States are not willing to renounce their sovereignty in budgetary policy, therefore most of these ambitious ideas are not likely to be applied in the next Multi-annual financial framework 2021 – 2027. Against this background, the present paper is devoted to the fiscal integration in the EU. The objective is to present the current institutional setting as well as to analyze the advantages and risks of a complete fiscal union. The paper is structured as follows: the first part outlines the existing elements of a fiscal union in the EU; the second part presents the new mechanisms envisaged in the Multiannual Financial Framework 2021-2027; the third part analyzes the advantages and risks of a possible complete fiscal union; and the fourth part concludes.

1. Current institutional framework of the EMU

The economic literature does not provide a single definition of a fiscal union. According to Dabrowski a fiscal union is broadly defined as a transfer of part of resources and competences in the area of budgetary policy and management from the national to the supranational level (Dabrowski, 2015, p. 7).

Fuest and Peichl (2012) distinguish the following elements of a fiscal union:

- fiscal rules, policy coordination and supervision,
- a crisis resolution mechanism,
- joint guarantee of government debt,
- fiscal equalization and other mechanisms of fiscal transfers between countries and
- a larger EU budget and European taxes (Dabrowski, 2015, p. 7).

Thirion (2017) proposes a somewhat different architecture, which may include the following three tiers:

- fiscal rules and crisis management mechanisms,
- banking union, including common deposit insurance and/or a fiscal backstop,
- joint debt issuance and fiscal insurance (Thirion, 2017, p. 3).

An important feature in all the above definitions is the availability of a mechanism for fiscal risk-sharing among the participating countries. This in turn requires the existence of a common budget of significant size which allows for direct transfers to member countries experiencing asymmetric economic shocks. At present the EU budget lacks this property because its amount is insufficient for macroeconomic stabilization.

Many of these elements are already present in the European Union. It should be noted that a complete fiscal union was not on the political agenda when the EMU was created. In the first years of the euro the common fiscal framework was represented mainly by the EU budget and the Stability and Growth Pact. The consensus at that time involved a combination of fiscal rules and market discipline through commitment to no bail-out and no debt monetization (Thirion, 2017, p. 1). These mechanisms were considered sufficient to ensure the sustainability of the public finances of euro area countries.

At the beginning of the 2010s, after a series of crises, however, it became clear that the stability of the common currency required deeper integration. This decade has seen significant changes in the EU institutional setting with the introduction of more rigid rules on fiscal discipline and new indicators for monitoring of macroeconomic imbalances as well as new mechanisms for financial assistance (See Table 1). An important reform involved the establishment in 2012 of the European Stability Mechanism, whose main objective is to support euro area government and banks through low-interest rate loans. Since its inception the ESM provided financial assistance to several euro area countries and contributed significantly for the mitigation of the sovereign debt crisis and bank crisis.

In addition to the fiscal mechanisms presented in the Table below, the foundations of a banking union were laid through the establishment of single bank supervision and single resolution fund. A banking union and fully integrated capital markets are also important building blocks of a genuine Economic and Monetary Union, along with a fiscal union.

Table 1: Existing elements of a fiscal union in the EU

Initial mechanisms	
EU budget	Amounts to around 1% of EU gross national income. The largest shares of the expenditure are devoted to the Common agricultural policy and the Cohesion Policy.
Stability and Growth Pact (SGP)	Set of quantitative criteria regarding several economic indicators, including level of budget deficit, public debt, inflation rate, long-term interest rates and exchange rates. Its objective is to promote nominal convergence of national economies of the countries sharing the common currency.
Mechanisms introduced after the crises	
Economic governance package	A set of rules for economic and budgetary surveillance, which comprises five regulations and one directive intended to strengthen the SGP. An important part is the European Semester. The package also introduced an Excessive Imbalances Procedures aimed at reducing macroeconomic imbalances.
European Stability Mechanism	Provides financial assistance to euro area countries and financial experiencing severe financial difficulties. Its lending capacity is 500 billion Euro.
Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (Fiscal Compact)	A treaty concluded after the outbreak of the debt crisis in the euro area. It requires from the EU Member States to introduce a balanced budget rule in their national legislations. The treaty is binding for the euro area countries, Bulgaria, Denmark and Romania.
European Fiscal Board	Its main responsibilities include evaluation of the implementation of the Union fiscal framework and the appropriateness of the fiscal stance at euro area and national level; suggestions for the future evolution of the Union fiscal framework, etc.

Source: European Commission, Council of the EU

2. Will MFF 2021 – 2027 lead to deeper fiscal integration in the EU?

The necessity to deepen the Economic and Monetary union through the creation of a fiscal stabilization function was recognized in recent years. In the so-called Five Presidents' Report from 2015 the former president of the European Commission Jean Claude Juncker stated that an automatic stabilization at the euro area level was necessary in order to improve the cushioning of large macroeconomic shocks and thereby make EMU overall more resilient (Juncker, 2015, p. 14).

Following this statement, in 2017 the European Commission presented a Roadmap with several ambitious steps for completion of the Economic and Monetary union by 2025, including:

- Establishment of a European Monetary Fund,
- Integration of the Fiscal Compact into the Union legal framework,
- Introduction of the position of a European minister of Economy and Finance and
- New budgetary instruments for support of euro area member countries (European Commission, 2017).

The proposed position of a European Minister of Finance and Economy would be a result of the merger of an EU commissioner and the president of the Eurogroup. Its institution would aim at improving the policy coordination and overseeing the EU and euro area budgetary instruments (European Commission, 2017, p. 10). As regards the European Monetary Fund, the intention expressed in the Roadmap was for it to replace the European Stability Mechanism. The creation of a common fiscal backstop to the Single Resolution Fund was also envisaged with in order to achieve convergence to prudent levels of public debt.

The basic principle laid down in the Roadmap was that any new financial mechanism for support of euro area countries should be a part of the EU budget. In particular, four specific functions were proposed for deepening of the Economic and Monetary Union:

- support to structural reforms in the Member States, □
- a dedicated convergence facility for Member States on their way to joining the euro, □
- a backstop for the Banking Union, through the European Stability Mechanism/European Monetary Fund and

- a stabilization function, bringing together different EU and euro area level funds and financial instruments, to be used to maintain investment levels in the event of large asymmetric shocks (European Commission, 2017, p. 8).

Despite the ambitions of the European Commission, and the support of Germany and France, only some of the described steps were included in the draft of the Multiannual Financial Framework 2021 – 2027, which was put forward in the spring of 2018. The MFF envisages the creation of the following new mechanisms to support the EMU:

- ***European Investment Stabilization Function (EISF)***

The EISF is intended to provide financial assistance in the form of loans and interest rate subsidies for public investment to a Member State which is experiencing a large asymmetric shock. It will be available for euro area Member States and other Member States that participate in the Exchange rate mechanism (European Commission, 2018, p. 19). The EISF is expected to mobilize up to EUR 30 billion in loans.

- ***Reform Support Programme***

With an overall budget of EUR 25 billion, it will assist Member States, through technical and financial support, in conducting reforms in product and labour markets, education, taxation, capital markets development, etc. As part of this mechanism, a Convergence Facility will also be established to support non-euro area Member States seeking to adopt the single currency (European Commission, 2018, p. 10).

- ***Budgetary Instrument for Convergence and Competitiveness (BICC)***

This instrument was not included in the initial draft of the MFF 2021 – 2027. It was initiated in late 2018 by Germany and France and the elaboration of the details was assigned to the Eurogroup. At the end of 2019 the Member States agreed on the establishment of the new BICC to be introduced in the next long-term budget. The BICC will be dedicated only to Euro area member states and the countries participating in ERM II. It will finance public investments and structural reforms with the aim to strengthen the potential growth of the economies and the resilience of the single currency against economic shocks (Council of the European Union, 2019). The new instrument will draw on the EU budget and it will be financed by the Member States.

Even if the proposed new mechanisms are adopted, the EU budget will still have relatively limited capacity for macroeconomic stabilization. Its size of around 1% of Gross National Income is insufficient for fiscal transfers among Member States. Moreover, the budget is financed mainly with GNI-based contributions, whereas taxes have a small share. In this sense, the EU budget is secondary to national budgets. A complete fiscal union would

require significantly larger share of own resources. Moreover, the MFF does not include the most ambitious reforms proposed by the European Commission, such as the establishment of a European Monetary Fund and a European Minister of Economy and Finance.

3. Advantages and risks of a complete fiscal union

Despite the significant developments of the past decade, the fiscal union in Europe is not yet completed and its institutional setting needs further improvements, beyond the changes envisaged in the MFF 2021 – 2027. According to Claus Regling, managing director of the European Stability Mechanism, the main goal in the next years will be to strengthen crisis mechanisms and particularly risk-sharing (Regling, 2018). A full-fledged fiscal union, with a risk-sharing mechanism, would bring significant benefits. In the first place, it is justified from the point of view the theory of optimum currency area. One of the criteria of an optimum currency area is the existence of a mechanism for fiscal transfers to participating countries experiencing economic and financial shocks. A supranational fiscal transfer system would compensate the lack of nominal exchange rate adjustments. Contrary to the prescriptions of the theory, EU Member States are still exposed to specific economic shocks, especially where public debt levels are already high, and governments have little room to respond with fiscal policy. Furthermore, euro area banks own large amounts of domestic sovereign or government debt, opening the door to a vicious cycle in which sovereign and financial distress reinforce each other. Therefore, an automatic fiscal risk-sharing mechanism is considered the most efficient way to insure against business cycle risks (Berger, Dell'Ariccia, & Obstfeld, 2018). Moreover, in large economic regions monetary policy can be pro-cyclical. Real interest rates tend to be too low in regions or countries with high growth, which leads to higher inflation, whereas regions with low growth rates tend to have high real interest rates (Regling, 2018).

The completion of the fiscal union would also reduce the pressure on the European central bank. Monetary policy has been the main tool on an EU level for macroeconomic stabilization since the outbreak of the crisis. But it has reached its limits, as evidenced by the persistently low and even negative interest rates. According to the former ECB governor Mario Draghi “the extraordinary monetary stimulus may have to last for a long time if there is no support from fiscal policy” (Financial Times, 2019).

The importance of closer coordination of fiscal policies has been confirmed by the increased confidence in the common currency. The strengthening of the institutional setting of the EMU has dispelled the fears for a possible breakdown of the euro area. Although, the consequences of the economic downturn are not fully overcome in some Member States, most of them have experienced stable growth in recent years. The ECB had the greatest role in restoring economic growth, whereas fiscal policy had complementary role. Nevertheless, the new elements of a fiscal union have become an integral part of the new, strengthened institutional framework of the EMU. In particular, the European Stability Mechanism was successful as a crisis management tool.

On the other hand, further fiscal integration implies some risks. First and foremost, budgetary policy is the only macroeconomic tool available for EMU countries and its centralization would lead to a loss of control of national authorities over their economies. Therefore, many Member States oppose to the initiatives for a stabilization function on an European level.

In the next place, the possible creation of a risk – sharing mechanism, with fiscal transfers among Member States, would lead to moral hazard. From this point of view, fiscal risk-sharing needs to be combined with mechanisms to ensure the implementation of structural reforms and to guard against incentives to adopt loose fiscal policies (Thirion, 2017, p. 2) It is also important to guarantee that a risk-sharing mechanism would not lead to permanent fiscal transfers.

Furthermore, a fiscal union alone would not be enough to guarantee the stability of the common currency without a banking union. Some major elements of the latter were already created, including the Single Supervisory Mechanism and the Single Resolution Mechanism. However, a common fiscal backstop continues to be needed to enhance the financial capacity of the Single Resolution Fund. Such a backstop would increase the confidence in the banking system (European Commission, 2017, p. 6).

4. Conclusion

The brief outline of the development of the institutional setting of the EMU shows that many of the elements of a fiscal union are already in place. The economic, debt and banking crises gave impetus for significant developments in the EMU “architecture” with the introduction of new mechanisms and rules. Despite these improvements, the fiscal union is far from completed and this will remain so after 2021. The project of MFF 2021 – 2027 envisages the establishment of several new financing mechanisms, including a

small euro area budget. These new tools are much more limited than the proposals made by the European Commission in its Roadmap for the completion of the EMU. However, the focus of this new tools is placed more on convergence rather than macroeconomic stabilization. Furthermore, the ideas of the European Commission for a European Monetary Fund and a European Minister of Finance were not included in the proposal for MFF. Thus, the important role of the public sector for macroeconomic stabilization will continue to be performed mainly by the Member States.

The main conclusion that can be drawn is that the creation of a full fiscal union in Europe is a long-term process. Many of its elements are already present in the institutional architecture of the EU while others, such risk-sharing mechanisms, remain to be developed.

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The introduction of the digital tax - arguments and effects

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Abstract: *The report examines the foundation of the digital taxation and the reform of international tax rules in the context of digitalization. The aim of the paper is to present the arguments for the digital services tax and to evaluate the effects of the various tax initiatives.*

The main focus is on the arguments related to value creation in digital context, on the one hand, and on the other, the compliance with the principles of fairness and efficiency. The results of other studies have been summarized.

The report looks in details at the implications of the unilateral introduction of digital tax in some countries and some of its adverse effects such as double taxation and discrimination. The evolution of the digital taxation is also examined. The OECD-led initiative that introduces the digital tax rules and the EU's two proposals have been analyzed.

The impact of these proposals is also discussed.

Keywords: digitalization, taxation, corporate tax.

JEL codes: H23, H25

Въвеждането на дигитален данък – основания и ефекти

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Резюме: Докладът изследва аргументите за налагане на данък върху дигиталните услуги и промяната на правилата на международното данъчно облагане с оглед на дигитализацията. Целта на изследването е да представи аргументите за промяна на облагането на дигиталните услуги и да оцени ефектите от обсъжданите инициативи.

Акцентът се поставя на аргументите, свързани със създаване на стойност в дигитален контекст, от една страна, и, от друга – на съответствието с принципите на справедливост и ефикасност. Обобщени са резултатите от други проучвания по темата.

Докладът разглежда последиците от едностранно въвеждане на дигитален данък в отделни страни и някои неблагоприятни ефекти като двойно облагане и дискриминация. Проследена е еволюцията на дигиталното облагане. Анализирани са предложенията за цялостна промяна на правилата за облагане на дигиталните услуги под ръководството на ОИСР, както и плановете на ЕС. Направена е оценка на последиците от дигиталното облагане.

Ключови думи: *дигитализация, данъчно облагане, корпоративен данък.*

JEL codes: H23, H25

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1. Въведение:

Налице е широк консенсус, че настоящите данъчни правила не са приложими в случаите на дигиталните компании, които са глобални, виртуални и гъвкави. Различни идеи за промяна на облагането на дигиталните услуги са тема на задълбочени дискусии сред експертите и на политически спорове.

Налагането на данък върху дигиталните услуги (ДДУ) е част от дневния ред на новата Европейска комисия, след като през март 2019 г. правителствата на ЕС не успяха да постигнат споразумение по директива за данък върху приходите от дигитална реклама. След този неуспех редица страни въведоха едностранно дигитален данък. Запазването му зависи от намирането на глобално решение за дигиталното облагане под егидата на ОИСР. Новите правила, предложени от ОИСР, ще позволяват данъците да се налагат дори в страни, в които дадена компания няма физическо присъствие. Те също така задават насоки за минимален корпоративен данък. Тези очаквани промени излизат извън обхвата на дигиталната икономика и вероятно ще засегнат и традиционния бизнес.

Актуалността на темата се подсилва от обстоятелството, че правителствата са изправени пред необходимостта да намерят начини за увеличаване на данъчните приходи след десетилетия на намаляване на ставките на корпоративните данъци. От друга страна, дигиталното данъчно облагане може да се превърне във фактор, влияещ на конкурентната позиция на икономики с различна степен на технологично развитие.

2. Аргументи за специалното данъчно облагане на дигиталните услуги

Тъй като въвеждането на дигитално облагане предполага сериозна промяна на международния данъчен ред, то се нуждае от внимателно проучване на специфичните аспекти на виртуалния бизнес.

Преходът към специални правила за облагане на дигиталните услуги се обуславя както от ефектите на дигитализацията, така и от засилената данъчна конкуренция между държавите и разцвета на схемите за избягване на облагането чрез използване на данъчни убежища и непроследими финансови потоци.

2.1. Засилена данъчна конкуренция между страните

В стремежа си да привличат чуждестранни инвестиции все повече страни възприемат политика на ниски данъци. По данни на ОИСР средната данъчна ставка в страните от организацията е намаляла с 8 проценти пункта след 2000 г., а в ЕС – с 10 пр. пункта.¹ Смята се, че намаляването на ставките се дължи на конкуренцията между страните в опит да представят по-атрактивни условия за бизнеса. Определящо е обстоятелството, че дигитализацията улеснява данъчната конкуренция между страните. Това е така, тъй като установяването на една дигитална компания в страна с ниски данъци не е свързано с ангажименти от страна на правителството за значителни публични разходи - осигуряване на довеждаща инфраструктура, инвестиции в образование с цел осигуряване на кадри (поради дистанционната заетост и относително малкия – спрямо добавената стойност, брой заети в предприятията от цифровата икономика). Следователно привличането на инвеститори от цифровата икономика не влече след себе си сериозни публични разходи, поради което правителствата могат да си позволят да намаляват ставките. Този аргумент ще бъде разгледан по-нататък в контекста на въвеждането на минимални ставки на корпоративния данък и с оглед принципа на ползите.

2.2. Избягване на данъци от дигиталните компании

Множество проучвания през последните години установяват, че дигиталните компании като цяло плащат по-ниски данъци в сравнение с традиционния бизнес. Това се дължи, от една страна, на мобилната природа на дигиталните бизнес модели, които правят по-лесно целенасоченото прехвърляне на печалби. От друга страна, са налице особености на дигиталния бизнес, които допускат изкривявания при определянето на данъчната основа и несправедливо разпределение на данъчната тежест (не само между различните юрисдикции, а и между различните участници във веригата на създаване на стойност).

Дигиталните компании използват различни техники за намаляване на данъчната основа и прехвърляне на печалбите – например, изкуствени сделки между техни подразделения (чуждестранни контролирани дружества, място на

¹ OECD Tax Database, <https://www.oecd.org/tax/tax-policy/tax-database/>

стопанска дейност), големи административни разходи, холдингови компании, базирани в страни с благоприятни данъчни режими като Люксембург.²

Значителна част от нетните приходи на Google, Facebook и други технологични компании се насочват към Ирландия, където данъчната ставка е 12.5%, а ирландското законодателство (поне до 2020 г.) позволява на компаниите, регистрирани там, да бъдат облагани според това къде се управляват финансите им.³ Facebook е платил през 2017 г. 16 млн. бр. лири данъци във Великобритания при приходи, отчетени в тази страна, в размер на 1.2 млрд. бр. лири и значителни разходи за администрация и за НИРД. През Ирландия, където компанията е имала малко над 1000 служителя, са отчетени продажби на социалната мрежа над 18 млрд. долара през 2017 г., но и значителни административни разходи. В тази страна Facebook е платил през 2017 г. само 38 млн. евро данъци върху декларирана печалба от 251 млн. евро.⁴

Според анализ на Standard and Poor's, от 2007 до 2015 г. средната ефективна ставка на данъка, платен в САЩ от 500-те най-високо оценени компании е 27%. През същия период ефективната данъчна ставка върху печалбите, отчетени в САЩ, на Apple е 17% , Alphabet (компанията-майка на Google) - 16%, Amazon - 13%, а Facebook - 3.8 %.⁵ Групата Fair Tax Mark⁶ от своя страна твърди, че шест големи технологични компании (Amazon, Facebook, Google, Netflix, Apple и Microsoft) са избегнали данъци за 100 млрд. долара (около 91 млрд. евро) чрез агресивно планиране през периода 2010-2018 г.

² Bergin, T., Special Report - How Google UK clouds its tax liabilities (May 2019), <https://uk.reuters.com/article/uk-tax-uk-google-specialreport-idUKBRE94005R20130501>

³ Varghese, S., This is why Silicon Valley giants are paying such low taxes in the UK (October 2018), <https://www.wired.co.uk/article/facebook-uk-tax-bill>

⁴ Facebook Ireland pays €38m tax on €251m profit (November 2018), <https://www.irishtimes.com/business/technology/facebook-ireland-pays-38m-tax-on-251m-profit-1.3713161>

⁵ Harris, H. Without a fair tax on tech, it could be the end of the state as we know it. (2018), <https://www.theguardian.com/commentisfree/2018/nov/11/tax-big-tech-companies>

⁶ Tax gap of Silicon Six over \$100 billion so far this decade, December 2, 2019, <https://fairtaxmark.net/tax-gap-of-silicon-six-over-100-billion-so-far-this-decade/>

Оценката на въздействие на двете предложения за директиви, свързани с дигиталното облагане на Европейската комисия от 2018 г., твърди, че на местно ниво дигиталният бизнес е обект на ефективна данъчна ставка от 8.5%, докато традиционният – 20.9%. По отношение на презграничните бизнес модели ефективните ставки са съответно 9.5% и 23.2%.⁷ За Франция различни оценки сочат отклонени печалби от 3 до 30 млрд. евро на годишна база.⁸

Фактът, че дигиталните компании плащат по-ниски данъци, сам по себе си не е основание за въвеждане на специален данък. Необходимо е да се познават причините за това.

2.3. Характеристики на дигиталните услуги

В следващата част се разглеждат особеностите на дигиталните услуги, които позволяват преднамерено или непреднамерено отклонение от плащане на данъци.

Дигитални монополи и концентрация. Въпреки че дигиталният данък негласно се приема като мярка, насочена срещу големите технологични компании, този аргумент може да бъде омаловажен при по-щателен анализ. Наистина редица изследвания сочат нарастване на концентрацията и пазарното влияние на пазарите на дигитални стоки и услуги. Но ограничаването на злоупотребата с господстващо положение е в обхвата на действие на антимонополните органи и в този смисъл не може да бъде основно основание за въвеждане на данъчно облагане или за твърде високи прагове. То може да бъде само допълващ аргумент, доколкото организирането на схеми за избягване на данъци е скъпа дейност, която предполага голям мащаб и не се изплаща за малки компании.

Роля на потребителите Дигиталният данък може да се разглежда като част от реформа, целяща облагането да се извършва там, където се създава стойност. В дигитален контекст това обикновено означава данъците да се налагат там, където са потребителите. Ангажираността на потребителите е елемент от създаването на

⁷ European Commission, Commission Staff Working Document Impact Assessment, (March 2018), p. 18.

⁸ За обобщение на проучванията за отклонените печалби виж International Corporate Taxation : What Reforms ? What Impact ?, Clemens Fuest, Mathieu Parenti and Farid Toubal, No. 54, November 2019p <http://www.cae-eco.fr/IMG/pdf/cae-note054-en.pdf>

стойност и се постига чрез различни канали, включително принос за създаването на съдържание, принос за промотиране на бранда, препоръки и други инструменти за навигация, захранване на алгоритмите с данни. Освен данните, извлечени чрез наблюдение, е налице и потребителско съдържание (видеа, снимки, публикации, рецепти), което хората съзнателно предоставят безплатно, често с цел социално взаимодействие.

Приносът на потребителите за създаване на стойност, включително потребителското съдържание, е аргумент, силно застъпен от британското правителство. В свое проучване⁹ то посочва, че социалните медии и дигиталните платформи разчитат на потребителско съдържание, за да генерират приходи от реклама. Много малко от тези приходи се облагат в страните, в които са разположени потребителите – автори на това съдържание (например, снимки, постове, потребителски отзиви).

Френското правителство и ЕС също обосновават едностранното въвеждане на дигитален данък с ползите, които се извличат от потребителите. Един аргумент за това е, че всеки ден в ЕС се извършват 750 милиона търсения в интернет и се публикуват 150 милиона публикации в социалните медии в ЕС.¹⁰

Според Службата на търговския представител на САЩ (USTR) обаче подобно твърдение е необосновано, тъй като са налице безплатни услуги, които потребителите получават.¹¹ По този начин САЩ се обявяват срещу промяната на международния принцип облагането да се извършва там, където е производството.

Мрежови ефекти. Наличието на мрежови външни ефекти е характерно за дигиталния бизнес и особено за многостранните пазари (платформите и социалните мрежи). Аргументът се споменава в обосновката на френския дигитален данък и на проектът за директива на ЕС и е в контекста на приноса на потребителите за

⁹ Corporate tax and the digital economy: position paper update, HM Treasury (March 2018), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/689240/corporate_tax_and_the_digital_economy_update_web.pdf

¹⁰ Ministère de L'Économie et des Finances, Project de loi Relative a la Taxation des Grandes Entreprises du Numérique, Mar. 6, 2019, <https://src.bna.com/F9D>.

¹¹ Section 301 Investigation: Report on France's Digital Services Tax (December 2019), USTR, стр. 20, https://ustr.gov/sites/default/files/Report_On_France%27s_Digital_Services_Tax.pdf

създаване на стойност. Мрежовите външни ефекти също така могат да бъдат аргумент за въвеждане на дигитално облагане, доколкото допринасят за увеличаване на пазарното влияние на дигиталните монополи.

Роля на данните. Данните, извлечени от наблюдението на потребителите, не само допринасят за по-доброто насочване на различни стоки и услуги в дигитална среда, но съставляват и самото съдържание на някои дигитални услуги, разчитащи на crowdsourcing (използване на мъдростта на тълпата): До голяма степен този аргумент е свързан с аргумента за участие на потребителите в създаването на стойност, но не го изчерпва. Алгоритмите извличат данни, които не произтичат само от потребителите. Това могат да бъдат данни, предоставени от правителствата или данни, създадени чрез наблюдение на други променливи във физическата или виртуалната среда.

Нематериални активи. Нарастващото значение на нематериалните активи като патенти и други права на интелектуална собственост в съчетание с тяхната мобилност ги превърна в инструмент за прехвърляне на печалби. Мултинационалните компании държат нематериалните си активи в юрисдикции с ниски данъци, което им позволяват изкуствено да намаляват данъчните си задължения. Когато компания от страна от ЕС трансферира интелектуална собственост към свързано лице в данъчно убежище, това може да даде възможност за изплащане на възнаграждения към това лице, които се приспадат за данъчни цели в европейската страна, в която компанията е установена.

Компенсация за публични услуги. Според френското правителство „големите дигитални компании са нараснали, без изобщо да плащат справедлив дял за публичните услуги, които получават”¹². Публичните услуги, от които глобалните дигитални компании се възползват, включват защита на правата на собственост, осигуряване на инфраструктура и публични разходи за образование и НИРД.

¹² Ministère de L'Economie et des Finances, *Project de loi Relative a la Taxation des Grandes Entreprises du Numerique*, Mar. 6, 2019, <https://src.bna.com/F9D>.

3. Еволюция на моделите на облагане на дигиталните услуги

Моделите за облагане на дигиталните услуги се развиха през последните години, създавайки богата практика. Важно е да се прави разлика между данък върху конкретни дигитални услуги и правила за облагане на корпоративните доходи в дигитална среда.

3.1. Едностранни инициативи

3.1.1. Данъци върху дигиталните услуги (ДДУ)

Преди да се наложи идеята за глобално решение, Унгария въведе данък върху приходите от онлайн реклама, Великобритания – данък върху отклонените печалби, а Индия – т. нар. изравняващ данък (такса), Франция – данък върху дигиталните услуги. Често тези данъци са наричани Google tax, тъй като засягат основно приходи от онлайн реклама. В таблицата е дадено сравнение на някои основни едностранни инициативи за дигитално облагане.

Таблица 1

Страна	Вид/Име	Год.	Данъчна основа	Ставка	Стойностен праг: глобален/ местен
Данък върху дигиталните услуги					
Унгария	Reklámadóról szóló	2014	Реклами в интернет на унгарски език	7.5%	-/100 млн. HUF (~300 хил. EUR)
Индия	Equalisation Levy	2016	Услуги на нерезиденти, извършвани с дигитални средства (реклама)	6%	
Франция	DST	2019	Приходи от реклама, от продажба на данни, услуги на платформите	3%	750 млн. EUR/ 25 млн. EUR
Италия	DST	2020*	Дигитална реклама, услуги на платформи, предавани на данни, генерирани на дигитален интерфейс	3%	750 млн. EUR/ 5.5 млн. EUR

Австрия	Digital Advertising Tax	2020	Онлайн реклама	5%	750 млн. EUR/ 25 млн. EUR
Испания	DST	2020*	Приходи от онлайн реклама и продажби на данни	3%	750 млн. EUR/ 3 млн. EUR
Турция	DST	1 март 2020	Онлайн услуги, вкл. реклама и продажба на дигитално съдържание	7.5%	750 млн. EUR/ 20 млн. TRY
Мерки за запазване на данъчната основа и срещу отклоняването на печалби					
Израел	Significant Economic Presence	2016	Данъчна ставка от 25% за дейности на нерезиденти, които имат значителен брой договори за онлайн услуги с израелски потребители, значителен уеб трафик от Израел, онлайн услуги на иврит и пр.		
Великобритания	Diverted Profit Tax	2015	Данъчна ставка 25 % + висока глоба върху печалби, реализирани след 1 април 2015 г., за които се смята, че са отклонени от облагане във Великобритания.		

Източник: Национални приходни агенции; <https://taxfoundation.org/digital-taxes-europe-2019/> * - предложение

Индия

Изравняващата такса (Equalisation Levy) в Индия е един от първите данъци върху дигиталните услуги. Въведена е през 2016 г. като данък върху услуги, извършвани с дигитални средства. Данъкът със ставка 6% се налага за плащания от резиденти (включително самонаети) или от нерезиденти, които имат място на стопанска дейност в Индия, към нерезиденти, които нямат място на стопанска дейност в Индия.¹³ Данъкът предвижда сравнително нисък праг – 100 000 рупии (1275 евро). Приходите за 2017/2018 г. са в размер на 5.5 млрд. рупии (над 70 млн. евро). Този данък се смята за краткосрочно решение, а дългосрочното е въвеждане на концепцията за значително икономическо присъствие.

¹³ Press Information Bureau Government of India, Ministry of Finance, Taxation of Digital Businesses (February 2019), <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1564086>

През 2018 г. страната промени закона за доходно облагане, така че да отрази концепцията за „значително икономическо присъствие” в случаите на нерезиденти, които са установили „бизнес връзка” с Индия.

Франция

Френският дигитален данък се отнася само за конкретни дигитални услуги, чиято стойност надвишава определени прагове: над 750 млн. евро в глобален мащаб и над 25 млн. евро във Франция. Очаква се поради високия праг данъкът да засегне 30 МНК, от които 20 от САЩ и една – френска. По тази причина Службата на търговския представител на САЩ (USTR) определи данъка като дискриминационен.¹⁴

Данъкът се отнася до следните дигитални услуги: онлайн реклама (включително услуги за управление и предаване на данни); управление и продажба на лични данни с цел насочване на онлайн реклама; услуги на дигитални платформи, които позволяват размяна на стоки и услуги (включително Uber, AirBNB). Директните продажби онлайн (вместо платформите, които осигуряват взаимодействие между продавач и купувач) са изключени, тъй като не е налице създаване на стойност чрез събиране на данни.¹⁵ Френският данък не се отнася за продажбите на дигитално съдържание (книги, видео и т.н.), както и за онлайн платежни услуги.

Данъкът се отнася до дял от брутните глобални приходи от определени услуги, който се изчислява като отношение на сделките по доставка на стоки или услуги, когато потребителят или доставчикът е във Франция или като дял от операциите, свързани с потребителски профил, открит във Франция. Когато става дума за реклама, делът се изчислява на база на частта от рекламите, показани на френски потребители, а когато става дума за данни, свързани с таргетирана реклама - дела на продадените данни, които засягат потребители, намиращи се във Франция,

¹⁴ Section 301 Investigation: Report on France’s Digital Services Tax (2019), USTR, https://ustr.gov/sites/default/files/Report_On_France%27s_Digital_Services_Tax.pdf

¹⁵ Projet de loi portant création d'une taxe sur les services numériques et modification de la trajectoire de baisse de l'impôt sur les sociétés, Les résumés des débats, 21 mai 2019, <http://www2.senat.fr/seances/s201905/s20190521/s20190521005.html>

когато данните са генерирани. Тези пропорции не зависят от стойността (комисиони, такси, цена на реклама и пр.) Следователно, страни, за които Google прилага по-ниски цени за реклама, биха получили по-висок данък, отколкото ако се прилагаше формула, отчитаща цените.

Данъкът бе въведен ретроактивно от 1 януари 2019 г. и ще бъде отменен, ако бъде постигнато международно споразумение за дигиталното облагане в рамките на ОИСР.

3.1.2. Други концепции за дигитално облагане

В допълнение към ДДУ (или вместо него) националните мерки за дигитално облагане могат да включват мерки срещу отклонението от облагане и специфични правила за определянето на мястото на стопанска дейност (МСД). Последното означава да се удържа данък независимо дали дадена чуждестранна компания има физическо присъствие (фабрика, търговски обект) в дадена страна.

Можем да разделим тези концепции на две групи:

- данък върху отклонените печалби (Великобритания, въведен през 2015 г. и Австралия, 2017 г.);
- значително икономическо присъствие или виртуално място на стопанска дейност (Индия и Израел; подход, залегнал и в проектодирективата на ЕС).

Великобритания

Великобритания е въвела данък върху отклонените печалби и подготвя въвеждането на данък от 2% върху някои дигитални услуги.

Данъкът върху отклонените печалби във Великобритания е приет през 2015 г. и вече донесе значителни приходи в британския бюджет – 700 млн. бр. лири до април 2018 г., както и повишение на приходите от ДДС.¹⁶ Неговата цел е да противодейства на фиктивните договорености, използвани от някои многонационални компании за отклоняване на печалби от Обединеното кралство.

¹⁶ Tackling tax avoidance, evasion, and other forms of non-compliance (March 2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785551/tackling_tax_avoidance_evasion_and_other_forms_of_non-compliance_web.pdf

С данък от 25% се облагат печалби, които се смятат за изкуствено отклонени от облагане във Великобритания. Данъчната ставка е по-висока от ставката, ако тези печалби биха били обложени във Великобритания.

Данъкът е насочен срещу създаването на данъчни предимства чрез трансакции, които нямат явен икономически смисъл.¹⁷ Макар да е наречен Google tax, данъкът обхваща и други трансакции (например, финансови). Данъчнозадължени лица са и субекти, които извършват дейност във Великобритания във връзка с доставка на стоки и услуги от чуждестранна компания и тази дейност цели да се избегне създаването на място на стопанска дейност във Великобритания или цели избягване на британския данък или споразуменията между страните са направени така, че да доведат до данъчни несъответствия. Това определение на практика включва случаите, когато чуждестранна компания предлага дистанционно дигитални услуги.

Израел

Концепцията т. нар. значително икономическо присъствие¹⁸ е въведена от Държавата Израел през 2016 г., чрез циркулярно писмо на данъчния орган (Circular No. 4/2016)¹⁹. Непосредственият повод за това е отхвърлена частна петиция, настояваща за облагане на чуждестранните дигитални компании с ДДС за дейността им в Израел. Писмото представлява указание на израелската данъчна администрация за определяне на място на стопанска дейност в случаите на дигитални услуги, тоест налице е разширяване на това определение. Приема се, че е налице значително икономическо присъствие и се налага данък от 25%, когато дейността се извършва основно чрез интернет и чуждестранният доставчик има значителен брой договори за онлайн услуги с израелски потребители и значителен веб трафик от израелски потребители, или представителят в Израел е ангажиран със събиране на информация за потребители в страната или с обслужване на

¹⁷ Diverted Profits Tax: guidance, HM Revenue & Customs (December 2018), <https://www.gov.uk/government/publications/diverted-profits-tax-guidance>

¹⁸ The Israeli Tax Authority published guidelines regarding taxation of foreign corporation activity in Israel via the Internet (2016), https://taxes.gov.il/English/About/SpokesmanAnnouncements/Pages/Ann_11042016.aspx

¹⁹ https://taxes.gov.il/incometax/documents/hozrim/hoz_kalkala_2016.pdf

клиенти, както и ако предлага онлайн услуги, адаптирани за израелски потребители (език, валута).

Налице са различия в облагането в зависимост от това дали с държавата на нерезидента е сключена Спогодба за избягване на двойното данъчно облагане (СИДДО). При наличие на спогодба признаването на печалби на място на стопанска дейност на чуждестранна компания в Израел се извършва в съответствие с принципа на сделките между несвързани лица (arm's-length principle), като се използва функционален подход на база естеството на функциите му, използваните активи и поетите рискове.

В допълнение представителят на чуждестранната компания, предлагаща дигитални услуги, би имал задължението да се регистрира като оторизиран дилър за целите на ДДС. Поради това, че не е инкорпорирана в закон и е в противоречие със съществуващите международни правила за определяне на МСД, израелската концепция е оспорвана от засегнатите чуждестранните МНК.

В допълнение, страната обяви през 2019 г. планове за въвеждане на ДДУ със ставка 3-5%, от което очаква постъпления в размер на 280 млн. долара.

3.2. Многострани решения и промяна на принципите на международно данъчно облагане

3.2.1. ЕС

Френският данък, както и повечето други едностранни инициативи в Европа, се основават на предложението на Европейската комисия за директива относно общата система за данък върху дигиталните услуги. Тя може да влезе в сила през 2021 г. при неуспех на ОИСР да постигне глобален консенсус и е част от по-голям пакет.

Инициативата за него от 2017 г. и е подкрепена от Франция, Германия, Италия, Испания и Великобритания²⁰.. Предложението за облагане върху

²⁰ Политическо изявление „Съвместна инициатива за данъчното облагане на дружествата, осъществяващи дейност в областта на цифровата икономика“, http://www.mef.gov.it/inevidenza/banner/170907_joint_initiative_digital_taxation.pdf

дигиталните услуги е представено през 2018 г. включва две директиви²¹, отнасящи се съответно до дигиталния данък (временно решение)²² и за значително дигитално присъствие (дългосрочно решение). Те, както и препоръка към държавите членки да отразят комплексното решение в своите спогодби за избягване на двойното данъчно облагане с юрисдикции извън ЕС²³ бяха представени през март 2018 г.

Краткосрочното решение предвиждаше дигитален данък в размер на 3% върху конкретно посочени дигитални услуги. Техният обхват и формулировка се различава от обхвата на френския закон в някои детайли. Облагат се приходи, произтичащи от: разполагане върху дигитален интерфейс на реклама, насочена към потребителите на този интерфейс; многостранна платформа, която позволява на потребителите да се свързват помежду си и която може също така за съдействия за доставките на стоки и услуги директно между тях; предаване на данни, отнасящи се до потребителите или генерирани от дейности на потребителите върху цифрови интерфейси (вкл. потребителско съдържание). По този начин данъкът бе ограничен до услуги, при чието създаване потребителите играят роля. Предвидено бе дигиталните данъци да се налагат в страната на местопребиваване на потребителите и спрямо компании, чийто глобален оборот надхвърля 750 млн. евро, а оборотът от посочените услуги в ЕС – 50 млн. евро.

След като през декември 2018 г. това предложение не успя да събере необходимата подкрепа, ЕК реши да ограничи обхвата на ДДУ. На 1 март 2019 г. бе предложена нова директива, чийто обхват бе стеснен само до дигиталните рекламни услуги. Тя не постигна необходимото за данъчни въпроси одобрение с единодушие от Съвета по икономически и финансови въпроси.

Дългосрочното решение предполага преди всичко разширяване на концепцията за МСД, като включи значителното дигитално присъствие. Това би

²¹ Proposal for a Council Directive laying down rules relating to the corporate taxation of a significant digital presence, COM(2018) 147 final; Proposal for a Council Directive on the common system of a digital services tax on revenues resulting from the provision of certain digital services, COM(2018) 148 final (Mar. 3, 2018), https://ec.europa.eu/taxation_customs/business/company-tax/fair-taxation-digital-economy_en

²² Proposal for a COUNCIL DIRECTIVE on the common system of a digital services tax on revenues resulting from the provision of certain digital services, https://ec.europa.eu/taxation_customs/sites/taxation/files/proposal_common_system_digital_services_tax_21032018_en.pdf

²³C(2018) 1650 final.

позволило една страна да облага чуждестранни компании, които имат значителна дейност на нейна територия, дори ако нямат физически офис или агент.

Условието за наличие на виртуално място на стопанска дейност в дадена страна предполага достигане на определен оборот и определен брой потребители в нея.²⁴ По-конкретно, ЕК предвижда дигиталните платформи да се приемат за облагаеми в дадена страна поради наличие на виртуално място на стопанска дейност, ако е изпълнено едно от следните три условия:

- минимален праг на годишните приходи в една страна от 7 млн. евро;
- повече от 100 000 потребителя в страна за една данъчна година (B2C);
- повече от 3000 договора за дигитални услуги с бизнес потребители (B2B).

Съответно се предлага да се променят праговете за оценка на обстоятелствата, при които значително цифрово присъствие представлява място на стопанска дейност във връзка с препоръката на ЕК за промени в СИДДО.

Приема се, че потребителят се е намирал в дадена юрисдикция в даден данъчен период, ако е използвал устройство през този данъчен период устройство за достъп до цифровия интерфейс, чрез който се доставят цифровите услуги. Това се установява чрез IP адрес или друг метод за геолокация. По отношение на сключването на договори се смята, че бизнес потребителят се намира в дадена юрисдикция, ако той пребивава за целите на корпоративния данък в тази юрисдикция или има постоянен обект.

Отнасянето на печалба към виртуално място на стопанска дейност става на база изпълняваните функции, използваните активи и поетите рискове, като се вземат предвид икономически значимите дейности, извършвани от такова присъствие чрез дигитален интерфейс. Икономически значими дейности са

- събирането, съхранението, обработката и продажбата на потребителски данни;

²⁴ Proposal for a COUNCIL DIRECTIVE laying down rules relating to the corporate taxation of a significant digital presence,
https://ec.europa.eu/taxation_customs/sites/taxation/files/proposal_significant_digital_presence_21032018_en.pdf

- събирането, съхранението, обработката и показването на създадено от потребителите съдържание;
- продажбата на рекламно пространство в интернет;
- предлагането на дигитален пазар на съдържание, създадено от трети страни;
- доставката на други дигитални услуги.

Разпределението на печалбите е на база разходите, направени за изследвания, разработване и маркетинг, както и броя на потребителите и събраните данни от потребителите в различни страни. Тези предложения в най-общи линии са в съответствие с целта на правилата за облагане в рамките на Приобщаващата рамка на ОИСР, но се различават значително по детайлите и механизма за отнасяне и за разпределяне на печалбите.

3.2.2. Модел на международно данъчно облагане в рамките на ОИСР

Едностранното въвеждане на дигитален данък е свързано с недостатъци като двойно данъчно облагане, а определянето на правило за значително икономическо присъствие не се съгласува добре със спогодбите за избягване на двойното данъчно облагане. Затова през последните години се засилиха усилията за глобално решение на въпроса.

Обсъжданите промени са в контекста на Проекта за мерки срещу намаляване на данъчната основа и прехвърляне на печалбите - Base Erosion and Profit Shifting (BEPS), чийто акцент е върху трансферното ценообразуване и други прояви на агресивно данъчно планиране. Проектът BEPS се състои от 15 мерки, формулирани през 2013 г. и влезли в сила от 2015 г. В резултат ЕС прие директивата срещу избягване на данъци (ATAD)²⁵, а в националните законодателства бяха въведени изисквания, като например: правила за хибридни несъответствия, които не позволяват на МНК да се възползват от различното третиране на финансови инструменти в различни страни; правила за ограничаване на признатите разходи за лихви; правила при напускане; правила за чуждестранните контролирани дружества; правила и документация за трансферно ценообразуване, включително за

²⁵ Пакет от мерки за борба с избягването на данъци, <https://www.consilium.europa.eu/bg/policies/anti-tax-avoidance-package/>

използваните методи за определяне на цените на сделките между несвързани лица и др.

Приобщаващата рамка (Inclusive Framework), която обхваща над 130 страни, включително България, трябва да представи проекта до края на 2020 г.

Мярка 1 на BEPS е насочена към данъчните предизвикателства на дигиталната икономика. През януари 2019 г. ОИСР предложи два стълба, около които да бъдат организирани предложенията за справяне с дигиталните предизвикателства – първият е насочен към отнасянето и разпределението на приходите и печалбите между държавите, вторият (GloBE) трябва да обхване останалите проблеми със свиването на данъчната основа в глобален мащаб. През октомври и ноември 2019 г. предложенията бяха публикувани за консултация.

Първият стълб би позволил на една страна да обложи дохода от дигитални услуги, предоставяни на потребители в тази страна от чуждестранна компания, която няма физическо присъствие в нея. Той е близък да представените идеи, свързани с виртуално място на стопанска дейност. Моделът на данъчните спогодби на ОИСР сега предполага, че печалбите се облагат в страната, където една компания е регистрирана, освен ако тя извършва дейност в друга страна чрез място на стопанска дейност²⁶)

Новата система надгражда основния принцип на данъчно облагане (облагаема връзка или nexus rule), според който страните могат да облагат само дейности на компании, които имат място на стопанска дейност (фабрика, офис) в дадена страна. Предлаганото ново правило допуска да се обхванат както дистанционните продажби, така и продажби от дистрибутор.²⁷ Предвижда се да има праг на приходите, над които това правило ще се прилага, като при това положение остава неясно как ще се обхванат безплатните дигитални услуги, предоставяни на потребители в дадена страна.

²⁶ OECD, Model Tax Convention on Income and on Capital: Condensed Version 2017, art. 7(1)

²⁷ Public consultation document: Secretariat Proposal for a "Unified Approach" under Pillar One, <http://www.oecd.org/ctp/beps/public-consultation-document-secretariat-proposal-unified-approach-pillar-one.pdf>

Освен това се надгражда и друго основно правило, свързано с трансферното ценообразуване – принципа на сделките между несвързани лица (arm's-length principle). За нерутинни операции (например, с нематериални активи) или там, където прилагането на този принцип води до затруднения, определянето на цените ще става по формула.

Предвижда се сложен тристепенен подход за разпределяне на облагаемата печалба между въвличените страни, който разграничава рутинна и нерутинна печалба, както и формиране на печалбата по функции – например, от маркетинг и дистрибуция. Най-общо, идеята е част от остатъчната, нерутинна печалба да се разпределя към страната на потребителя. Предлагат се три варианта на разпределение на печалбата – на база участието на потребителите, нематериални маркетингови активи и значително икономическо присъствие. Предложеното разпределение борави с предположения и се очертава да бъде обект на спорове.

Вторият стълб съдържа правила срещу свиване на данъчната основа. Той ще позволи на държавата, чието местно лице е чуждестранната компания, да изисква от нея да плаща поне минимален данък върху световните си печалби, ако доходите не са обложени в страната на потребление или е налице прехвърляне на печалби в страни с ниски данъци. Тези правила ще засегнат и традиционните компании, които притежават, например, нематериални активи. Те се отнасят както до страната на местното лице, така и до страната на източника на дохода. Например, страната на местното лице може да обложи дохода на чуждестранно контролирано дружество, ако той е бил обложен с ефективна ставка под минималната. А страната на платеща може да обложи при източника плащания към свързани лица, ако те не се обложени или са обложени под минималната ставка

Според становище на KPMG преминаването към глобален стандарт за финансови отчети изглежда ще създаде обща корпоративна данъчна основа, поне по отношение на извънтериториалния доход, което би било голяма промяна в международната данъчна система.²⁸ Идеята за минималния данък напомня

²⁸ KPMG report: OECD proposal under Pillar Two; addressing tax challenges of digitalisation of the economy, (November, 2019), <https://home.kpmg/us/en/home/insights/2019/11/tnf-kpmg-report-oecd-proposal-pillar-two-addressing-tax-challenges-digitalisation-economy.html>

въведения с данъчните промени в САЩ през 2017 г. 10.5% минимален данък върху глобалния доход от нематериални активи, обложен с ниски данъци.²⁹ Конкретният размер на минималния данък не се посочва в предложенията на ОИСР, но в примерите е заложена ставка от 15%.

Достигането на компромис в рамките на ОИСР се спъва както от опасенията за административна тежест, така и от съпротивата на засегнатите страни. В писмо до генералния секретар на ОИСР³⁰ от американският финансов министър Стивън Мнучин препоръчва клауза *safe harbour* по отношение на Първия стълб. На практика това означава правилата за отнасяне и разпределение на печалбите да не бъдат задължителни (ако се поемат други ангажименти).

4. Оценка на инициативите за дигитално облагане и последиците от тях

Дигиталният данък, въведен като едностранна мярка, облага брутните приходи от конкретни услуги. Той не е данък върху печалбата или данък върху сделките (за разлика от ДДС), а данък върху оборота. Европа се отказа от този тип данъци през 60-те години на ХХ век, поради това, че те са неефективни, несправедливи и пречат икономическия растеж.³¹ Според изказване на френския министър на икономиката Брюно льо Мер³² данъкът, въведен в страната, е основан на оборота, тъй като е твърде сложно да се определи как се извлича печалба от данните.

Но според ОИСР подходящата база за облагане може да бъде или печалбата или потреблението (ДДС или данъци върху продажбите)³³ Вместо това

²⁹ What is global intangible low-taxed income and how is it taxed under the TCJA?, Tax Policy Center, <https://www.taxpolicycenter.org/briefing-book/what-global-intangible-low-taxed-income-and-how-it-taxed-under-tcja>

³⁰ Виж <https://www.oecd.org/tax/Letter-from-OECD-Secretary-General-Angel-Gurria-for-the-attention-of-The-Honorable-Sтивен-T-Mnuchin-Secretary-of-the-Treasury-United-States.pdf>.

³¹ Bunn, "A Summary of Criticisms of the EU Digital Tax," TaxFoundation.org, October 2018, <https://taxfoundation.org/eu-digital-tax-criticisms/>

³² Ministère de L'Économie et des Finances, *Project de loi Relative a la Taxation des Grandes Entreprises du Numérique*, Mar. 6, 2019, <https://src.bna.com/F9D>.

³³ OECD, *Addressing the Tax Challenges of the Digital Economy: "Fundamental Principles of Taxation,"* стр. 32-47 (2014).

дигиталният данък облага оборота, което може да доведе до облагане на губещи дейности или в резултат на налагането на дигитален данък компании с ниска норма на печалба могат да отчетат загуба. За компания с рентабилност от 10%, дигиталният данък би довел до ефективна ставка на данък върху печалбата от 30%. От икономическа гледна точка такъв данък би имал ефект, подобен на налагането на мита върху вноса (още повече, че в повечето страни поради високите прагове той се отнася до чуждестранни компании).

Облагането на brutните приходи, вместо на печалбата нарушава принципа на ефективност и справедливост (възможност за плащане) и може да създаде икономически бариери между страните. Данъкът е насочен към сравнително малка група компании и за конкретни услуги, което нарушава принципа на неутралност. Поради бързото развитие на технологиите и способността за модифициране на дигиталния бизнес, проблемът с облагането или необлагането на конкретно посочени услуги може да се задълбочи с времето. Данъците върху brutните приходи в международен контекст могат да доведат до двойно облагане, тъй като една чуждестранна компания, която плаща данъци в родината си, не би могла да приспадне платения дигитален данък, например, във Франция.³⁴

Ето защо отделни страни, както и ОИСР достигат до идеята, че не трябва да има специален данък, който да огради дигиталните услуги от останалия бизнес. Вместо това следва да се приложат общи решения за установяване на връзката между реализираните приходи и мястото на облагане и за разпределение на печалбите.

Един съществен проблем и източник на спорове и несигурност е свързан с разпределението на приходите/печалбите между страните. Докато френският данък предвижда разпределение на база натурални показатели (дял от показваните реклами на френски потребители), индийската концепция предвижда разпределяне на приходите на база на приета норма на печалбата за различните бизнеси.

³⁴ Bunn, "A Summary of Criticisms of the EU Digital Tax," TaxFoundation.org, October 2018, <https://taxfoundation.org/eu-digital-tax-criticisms/>

С оглед на избрания в доклада подход да се разглежда ДДУ в контекста на приноса на потребителите, стои въпросът за съответствие между основанията на дигиталното облагане и неговия механизъм. Предложенията в рамките на ОИСП засега са концентрирани върху преднамереното отклонение от облагане. Те в по-малка степен отговарят на заявената цел за съобразяване на облагането начина, по който потребителите и данните допринасят за създаването на стойност.

Непрозрачната и сложна верига на стойността в дигиталния бизнес, както и наличието на множество безплатни услуги, които са част от опосредствана размяна чрез дигиталните платформи, създават трудно преодолими затруднения. Всички разгледани схеми се основават в по-малка или по-голяма степен на предположения. Това може да са предположения за нормата на печалба, характерна за дадени дигитални услуги или сектори, предположение за местоположението на потребителя в момента на реализиране на сделката и т.н.

Практическото прилагане на новото дигитално облагане ще зависи от това дали ще се намери работещо решение по въпроси като:

- средства за измерване на дигиталното присъствие/броя потребители и мерки срещу заобикаляне на данъка (испанският проектозакон, например, предвижда наказателни мерки за потребители, които крият IP адреса си)
- определяне на приноса на тези потребители в създаването на стойност (напр., когато взаимодействат потребители в различни страни или един и същ потребител използва абонамент в различни страни).

Този въпрос е засегнат в становището на Европейския икономически и социален съвет, според който броят на потребителите на цифрови услуги е лесно манипулируем критерий за облагаема връзка.³⁵

Последиците от дигиталното облагане биха се различавали значително в зависимост от териториалния обхват и възприетия подход – въвеждане ДДУ или промяна на правилата в рамките на BEPS (вкл. въвеждане на виртуално МСД).

³⁵ Становище на ЕИСК относно „Предложение за Директива на Съвета за определяне на правилата относно корпоративното данъчно облагане на значително цифрово присъствие“, <https://eur-lex.europa.eu/legal-content/BG/TXT/HTML/?uri=CELEX:52018AE1556&from=BG>

Едностранното въвеждане на ДДУ от отделни страни със значителен брой потребители с висок доход и развита дигитална инфраструктура би увеличило данъчните им постъпления. На ниво ЕС например се планираше приходите от ДДУ да достигнат 5 млрд. евро, а само във Франция прогнозата е за 500 млн. евро. Но този резултат може да е за сметка на множество съдебни спорове, увеличени цени на онлайн услугите, отлив на инвеститори, които са партньори на засегнатите компании.

Някои от посочените дефекти могат да бъдат избегнати, ако се стигне до глобално решение в рамките на инициативата на ОИСР. В този случай обаче цената ще са увеличени административни разходи за спазване на данъчните задължения.

Като всяка значима промяна новите принципи на дигитално облагане ще създадат губещи и печеливши. Големите мултинационални компании биха загубили част от данъчните предимства. Предложените решения по Първия стълб на Мярка 1 на ОИСР биха довели до преразпределяне на данъчните приходи от страни, които са големи производители на дигитални стоки и услуги, към страни с голяма потребителска база и добра дигитална инфраструктура. В голямата си част печелившите страни ще бъдат тези с по-ниски доходи, особено в Азия. Във връзка с това представлява интерес изследване на МВФ, според което страните извън ОИСР (тоест страните с по-нисък доход), губят около 1.3% от националния си доход годишно поради прехвърлянето на печалбите в юрисдикции с ниски данъци (спрямо 1% за развитите).³⁶

Предложенията за въвеждане на минимални ставки по Втори стълб, от друга страна, биха намалили атрактивността на юрисдикции с благоприятни данъчни режими. Страните, които разчитат на ниски данъчни ставки (до известна степен и България), за да привличат чуждестранни инвеститори, ще бъдат изправени пред необходимостта да преоценят конкурентните си предимства.

Също така е налице разлика по отношение на въздействието върху малките и средни предприятия. Докато временното решение (ДДУ) като цяло е насочено към големите дигитални компании, дългосрочното решение, по-специално в ЕС

³⁶ IMF Policy Paper - Corporate Taxation in the Global Economy (2019),
<https://www.imf.org/~media/Files/Publications/PP/2019/PPEA2019007.ashx>

предвижда сравнително нисък праг (7 млн. евро). За разлика от ДДУ обаче това решение не е задължително да доведе до допълнителни данъчни задължения на тези компании (в зависимост от това къде са установени, дали са ангажирани с трансгранични схеми и т.н.). В същото време налагането на ДДУ може да засегне и малкия бизнес, както и в по-широк смисъл потребителите, тъй като се очаква дигиталните компании да го прехвърлят чрез увеличение на цените, таксите и комисионите.

Ясно противостоящите интереси на страните, както и техническата сложност на предложенията ще направят трудно намирането на глобално решение.

Заклучение

Въвеждането на дигитален данък се различава значително от инициативите за промяна на глобалните правила на облагане с оглед на предизвикателствата на дигитализацията. Дигиталният данък е по-несъвършен инструмент, но той е полесно приложим, отколкото предложенията по Мярка 1 от Проекта BEPS.

Успехът на дигиталното облагане до голяма степен ще зависи от неговия дизайн. Не е възможно универсално стандартно решение в глобален мащаб, без да се отчитат спецификите на различните дигитални услуги, както и на различните данъчни системи в отделните страни.

Посочените практически проблеми предполагат, че ще бъде трудно да се намери решение в глобален план до края на 2020 г. Вероятно е да се достигне до компромис по елементи от втория стълб (минималната данъчна ставка).

При провал на усилията за глобално решение в рамките на ОИСР е вероятно да се формират коалиции от страни, които да договорят прилагането на правилата за дигитално облагане помежду си (своеобразен данъчен дигитален съюз). ЕС е в позиция да привлече към такъв съюз и други страни поради силната си позиция при трансферите на данни, благодарение на Общия регламент за защита на личните данни.

The Greek capitalism in crisis: institutional characteristics and sustainability of accumulation

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Abstract: *The Greek crisis offers a series of theoretical and empirical questions regarding the relationship between the emergence of the sovereign debt crisis, the accumulation regime and certain institutional characteristics specific to Greece. Given a large focus of the existing literature on the financial dimension of the Greek crisis, we adopt a different approach of the phenomenon pointing out its institutional aspects. This paper, which is part of our thesis research, emphasizes the role of the State in the early years of the economic reconstruction right after the Second World War and the civil war in Greece by highlighting the particular role of the dominant political blocs. In terms of methodology, we apply the Regulation Theory coupled with the Marxian Theory in order to study the specificities, which constitute a particular economic model and construct a system of problematic accumulation, which, ultimately, weakens its growth dynamic.*

Key Words: Greece, economic crisis, accumulation regime, institutions

JEL codes: B520, P160

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1. Introduction

At the heart of the economic crisis of 2008, the countries of Southern Europe are found, where the crisis still endures. Greece is one of the countries of Southern Europe experiencing a real economic and social disaster. The year of 2010 is a turning point for the Greek economy and society; the country goes bankrupt and a climate of uncertainty prevails in society. Papandreou's government is asking for financial support from the European Union and the IMF. In the spring of 2010, the Greek Parliament approves the first package of measures and the monitoring by three European institutions (the Troika): the IMF, the European Commission, and the ECB. Since then, the country has signed three memoranda, as well as a dozen agreements with complementary measures. Theoretically, the memoranda aim to ensure the repayment of debt and the correction of the generating causes that led to the state of bankruptcy. Since then, the Greek economy has been under a tight supervisory regime and has faced one of the biggest austerities in its history.

Despite these strict austerity measures that have been implemented, the country cannot get out of the crisis. Recent studies show that the increase of unemployment, poverty and inequalities, the deterioration of working conditions, the violation of labor rights, the increase of insecurity and precariousness at work, the deterioration of the education and health system, the weakening of public services and social security, the proletarianization of the middle classes and the marginalization of workers are the most serious problems Greece has been facing since 2010 (Vlachou, Theocharakis, Mylonakis, 2011; Tsoukalas, 2013). Nearly 10 years later and despite all the severe austerity measures, Greece is still unable to escape the crisis. But how Greece did get to that point?

Until now the majority of economists have been focusing mainly on the financial dimension of the Greek crisis by targeting aspects of the phenomenon like the debt repayment, its management or some other technical aspects. However, the crisis that the Greek economy and society have been going through for almost ten years is a purely structural crisis. This structural crisis has not only a financial dimension but also a social, institutional, political and ideological one.

The current paper follows the structure of our thesis and its purpose is to present the structure of our research work, our proposed methodological approach, and the first insights of our research. Starting with a brief presentation of the research questions and the methodology, we move forward to a brief literature review in order to situate our interpretation of the phenomenon in the existing literature, and we conclude with a discussion about the role of the State in the Modern Greek economic model.

2. Research questions

The Greek crisis offers a series of theoretical and empirical questions regarding the relation between the emergence of the sovereign debt crisis, the accumulation regime and certain institutional characteristics specific to Greece. These questions lead us to study the institutional specificities, which constitute a particular economic model and construct a system of problematic accumulation, which, ultimately, weakens its growth dynamic. Greece is our case study to answer a key question: what is the impact of the institutional specificities of the Greek economic model on the sustainability of the accumulation regime?

In this respect, we consider the current economic crisis in Greece as a result of the European and world economic situation, but at the same time as the result of internal economic, social, political and institutional problems. As such, the role of national elites in connection with the external forces of globalization and Europeanization is fundamental. It is therefore essential to identify the institutionalized compromises that led to the construction of the Greek accumulation regime and its possible deficiency.

Our research is structured on that basis, and its objective is to study the interconnections and interdependencies between the regime of accumulation in Greece and its chronic institutional dysfunctions. Thus, the approach of the thesis is at once theoretical, historical-institutional and empirical.

3. Literature review

Different interpretations and approaches have been given to explain the economic crisis in Greece creating a fierce academic debate among economists. In our literature review we try to classify the

different interpretations and approaches that have been given for the Greek crisis into large, aggregate groups. The complexity of the Greek reality and its historical path makes this task a quite challenging one as the boundaries between such groups can be vague and subjective. One possible classification is proposed by Stavros Mavroudeas (2018) who identifies three major groups: mainstream interpretations, heterodox interpretations and Marxists ones.

According to Stavros Mavroudeas, mainstream interpretations refer mainly to neoclassical and neo-Keynesian interpretations, as well as, to the New Consensus Economics (Arestis, Sawyer, 2002). Mainstream interpretations ignore the historical aspect of economic laws as well as the fact that the very substance of economic relations is social – in other words, composed of socially instituted forms (Nadel, 2002, p. 42) and so they don't have their own theory of crisis as they argue that “capitalism is a perfect system that under normal circumstances and agents behavior is not going to face crises” (Mavroudeas, 2018, pp. 16-17). Irresponsible acts, violations of the conditions of perfect competition are some of the reasons that, according to Neoclassicals, can cause an economic crisis².

In heterodox approaches, we find mostly post-Keynesian interpretations. In Greece a well-known approach for the Greek crisis is the Minskian analysis of George Argitis (2012). More precisely, George Argitis is raises a critic on the New Consensus Economics by arguing that the theoretical framework of the New Consensus Economics fails to perceive the current economic crisis in its entirety. In doing so, he suggests Minsky's “financial instability hypothesis” (2013, p. 485), as a counter-proposal arguing that the current economic crisis is caused by the endogenous problematic structure and functioning of the financial system (2013, p. 501).

Last but not least, Marxist interpretations³ follow the analysis and methodological schema of Marx and Marxian theory. Marxist approaches propose a structural analysis of the Greek crisis by locating its roots in the sphere of production. At the heart of this analysis we find the tendency of the rate of profit of the Greek economy to fall (Maniatis, Passas, 2014) that is being combined with

² For an extensive presentation of the arguments of the mainstream economists for the Greek crisis see Mavroudeas, 2016.

³ For a deep Marxist analysis of the Greek crisis see Maniatis and Passas, 2014; Mavroudeas, 2014; Mavroudeas, 2013; Sotiropoulos, Milios and Lapatsioras, 2019.

two additional arguments such as the financialized capitalism who is profiting without producing (Lapavitsas, 2008 & Lapavitas, 2009) and the subordinate position of Greek capitalism in the context of European unification (Economakis, Markaki, 2016).

As the economy goes side by side with policy, different interpretations of the economic crisis not only affect how we understand the crisis in Greece but also lead to different policy proposals and solutions. Hence, the further enquiry of the root causes of the Greek crisis becomes of great importance to policy makers as it advises on policies addressing the real issues of the Greek economy that could lead to a sustainable regime of accumulation instead of short-term solutions that only perpetuate the long-standing problems of the Greek accumulation regime.

4. Our interpretation

In view of the interpretations made by the three groups of economic thought presented above, we propose a different analysis for the economic crisis of 2010 in Greece, by highlighting the institutions that govern a particular regime of accumulation. With this goal, we mobilize a radical interpretation by applying the Marxian theory coupled with the particular notions of the Regulation Theory such as the regime of accumulation and the mode of regulation applied to institutional and economic analysis.

By regime of accumulation, we mainly mean the modalities of the reproduction of the capital in a given economy and time period. The definition proposed by the Regulation Theory is the following: “The set of regularities that ensure the general and relatively coherent progress of capital accumulation, that is, which allow the resolution or postponement of the distortions and disequilibria to which the process continually gives rise. These regular patterns relate to:

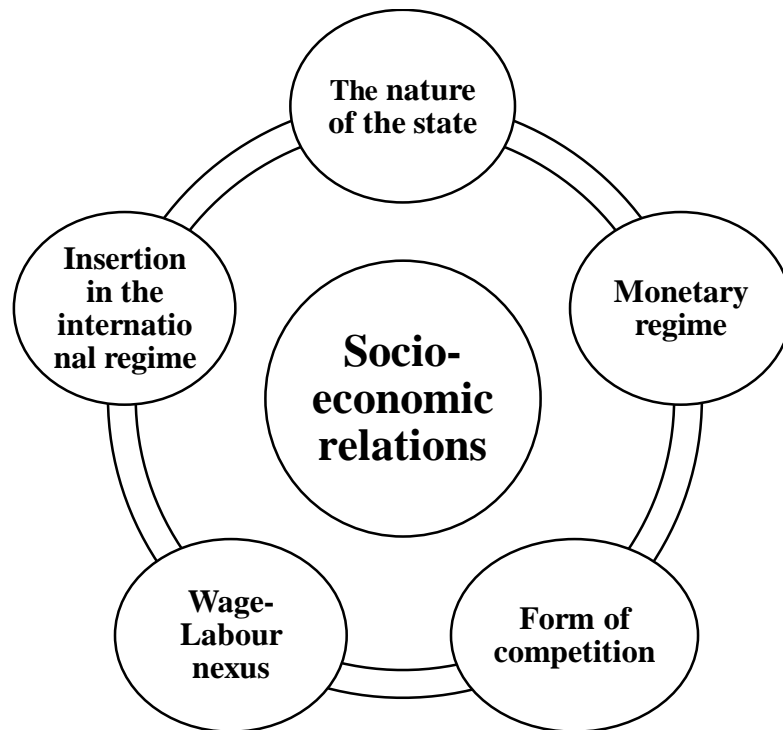
1. The evolution of the organization of production and of the workers’ relationship to the means of production.
2. The time horizon for the valorization of capital, which offers a basis for the development of principles of management.
3. A distribution of value that allows the reproduction and development of the different social classes or groups.

4. A composition of social demand that corresponds to the tendencies in the development of productive capacity.

5. A manner of articulation with non-capitalist economic forms, when they hold an essential place in the economic formation under study” (Boyer, Saillard, 2005; Boyer, 2004).

Respectively *mode of regulation* is the set of procedures of both individual and collective behaviors that form and determine the institutional framework in a given period and a given society. This set of procedures maintains the reproduction of the fundamental social relations and aims to regulate and ensure the viability of the capital accumulation. In this perspective, the Regulation Theory provides us with a theoretical model of five institutional forms that dominate in the capitalist mode of production, as presented in Figure 1 below.

Figure 1. Institutional Forms in the Regulation Theory



Source: Author’s own figure

Notes: These 5 institutional forms are the codification of fundamental socio-economic relations and define a specific accumulation regime.

We consider that the simultaneous holistic and institutional character of the Regulation Theory offers us some methodological tools essential to understanding the Greek crisis. The fact that this theory emphasizes the importance of socioeconomic relations as one of the most decisive factors

that rule a regime of accumulation or growth model enables us to see this crisis as a structural one. Accordingly, the attention given to the role of history, guides us to the past to trace back the roots of the phenomenon. Both components are adopted by Marxist theory attaching to it a more institutional style, but without altering its core.

Thus, the initial purpose of our research work is to study the specific mode of regulation of the social and economic relations of Greece, and to delve into the particular institutional framework of the country and the relations that define Greece's accumulation regime. Therefore, we conduct an economic and historical summary starting from 1950, right after the Second World War and the civil war in Greece (1946-1949), when the economic reconstruction of Greece began. As a second step, we identify and analyze the performance of the dominant institutional form (or forms) to record its relationship and its impact on the accumulation regime and to evaluate its viability. This procedure will enable us to bring out the complementarity and hierarchy of underlying institutional forms resulting from the particular institutional structure of Greece and to see not only how but also why endogenous mechanisms and institutional weaknesses which are characterizing the Modern Greek economic model, have acted both as symptoms and causes for the country's contemporary economic crisis.

5. The role of the State

The State, as we have presented above, is one of the 5 institutional forms proposed by the Regulation Theory. In this respect, Regulation Theory explores the nature of the relations between the State, the capital and the procedure of accumulation to analyze the effects of different forms of state on economic dynamics across time and space (Keramidou, 1996). Additionally, Regulation Theory sees the State as the set of institutionalized compromises that aim to maintain the political equilibrium⁴ (Amable, Guillaud, Palombarini, 2012). So, once established, they produce rules and

⁴ "In the political economy approach developed by S. Palombarini, 2001; B. Amable, 2003; B. Amable and S. Palombarini, 2005, 2009, the viability of a socio-economic model depends on its ability to regulate social conflict, whose roots lie in the socio-economic differentiation of the interests of individual and collective agents, and the heterogeneity of social expectations that stems from this differentiation. The regulation of the conflict does not correspond to its solution or its overtaking. In general, the variety of socio-economic interests corresponding to highly differentiated social systems and the scarcity of resources that public policies can mobilize will hinder the satisfaction of all social expectations. The regulation of the social conflict does not presuppose a response to the totality of the demands that come from the economic agents. Public policies necessarily make a selection among social expectations. A situation in which social conflict is regulated can be defined as a political equilibrium, that is, the challenge of social groups whose demands have been ignored by political leaders limited to a minority position in the political representation or even repressed with the help of legitimate violence. Therefore, the dominant social groups whose

standards regarding the evolution and the management of the general conditions of expanded reproduction of capital, labour relations, social security, public expenditure and revenue.

Regarding the Greek case, our analysis so far covers the period of 1950 to 1974. It is important to note that 1950 is considered the year when the economic reconstruction of Greece began, marked by the end of the civil war the year before, in 1949. On the other end, 1974 is the year of the fall of a military dictatorship that lasted 7.5 years. Undoubtedly, this period time is one of the most crucial ones for Greece as decisions made during this period determined the future course of the country and laid the foundations upon which the Modern Greek growth model was developed. We argue that it is in this time period that we could trace back to the real causes of the 2010 crisis.

Our study so far has identified the State as the dominant institutional form for the first postwar period. This institutional hierarchy seems to endure until today. But how did the State become the dominant institutional form in Greece? The answer to that question is highly complex, as there is a very broad mix of factors that vary across time which altogether led to this predominance of the State. One leading intertemporal factor that we can identify is the role of political groups in Greece and their relevant balance of power, as well as how institutional conflicts are conducted.

By the end of the civil war and the defeat of the leftist movement, the primary goal of the Conservative front was to rebuild and remodel the State in a way that would allow them to legitimize their power. The State in Greece always functions as the main tool of the dominant group, but also as the mean by which the dominant group can reproduce its material, political and ideological conditions of existence. But when does a dominant group of power really manage to impose its power in a society? When it is not only politically but also ideologically prevalent.

There are two main political characteristics during this period: the frequent rotation of governments and the massive and intense reactions and mobilizations of the Greek people who demand an improvement of the standards of living and the democratization of the State and other institutions.

demands are taken into account in the formation of public policies, constitute a dominant social block (BSD)” (Amable, Guillaud, Palombarini, 2012, p. 27).

The dominant class has not yet gained the social consensus needed to institutionalize its sovereignty. It, therefore, seems that from a social and ideological point of view the dominant groups in Greece are weak and often face the rivalry of the dominated social classes. Far from thinking of the general improvement of the country's economic and social situation, which has a longer-term time horizon, the dominant political bloc is moving towards other means such as the clientelism and bribery. According to J. Meynaud: "It is common for the individual to cast his vote based on benefits received or promised and not based on ideological convictions. It is possible that the commentator from a developed country denounces the operation as cheating and sees the index of land amorality in those who engage or benefit. But this is the point of view of a man for whom the continuation of existence does not pose any basic material difficulties. In reality, the populations considered sometimes live in such misery that patronage can be analyzed as a necessity of existence. Since voting is one of the few goods that society grants them, it is normal for these underprivileged groups to try to make the most of it. In short, patronage is a kind of compensation for the isolation, the deficiency and the inadequacy of the labour market, the material powerlessness and poverty of all Greeks who have not yet been touched by the forms of the modern economy" (1965, pp. 42-43).

Therefore, on the one hand, these means are used by the dominant class to solve immediate socio-economic problems, however not permanently, in exchange for electoral support. But, on the other hand, when such a situation becomes permanent, it also acquires another character, that of the entire control of a society by its political elite to impose and institutionalize its power. It is then that the particular relations which characterize contemporary Greece are constructed; relations of "give, receive, return" between the deputy and the citizen.

6. Conclusion

As a result of both internal and external political and economic choices, Greece survives under conditions of economic and social bankruptcy since the outbreak of the crisis in 2009. Despite the measures adopted by the governments, the country doesn't seem to find the exit from this impasse. Providing to our analysis an institutional character, we use the five institutional forms of the Regulation Theory as a methodological tool to investigate this phenomenon.

In this paper, we emphasize particularly in the role of the State. A first result of our research identified the State as the dominant of the five institutional forms proposed by the Regulation Theory for the first post-war period. The efforts of the dominant political blocs to impose their sovereignty, after the wars, turned the State to the hierarchical institutional form for that period. Through this process, these blocs manage to control the state mechanism in order to maintain and expand their political and economic conditions of existence.

The synoptically sketched-out institutional analysis in this paper will be the backbone of our thesis and on that basis, we continue our research work. In doing so, we try to trace back and analyze the way that the institutional forms in Greece were structured and how they evolved during the years of the contemporary economic crisis. Finally, our thesis work is intended to end by discussing some prospective solutions and alternative economic policy proposals to guide the country in a way out of its vicious cycle.

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Empirical analysis of the relationship between the exchange rate and the inflation rate with the VAR model case of Vietnam (1995-2016)

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The analyses in Chapter 2 lead us to a question on the relationship between foreign exchange reserves and the monetary base. Changes in the foreign exchange reserve will affect changes in exchange rates. We can use the foreign exchange reserve as a tool to modify and anticipate the exchange rate in the economy. Moreover, inflation has a strict relationship with the quantity of currency and Vietnam's monetary source depends in particular on changes in external assets. In the case of Vietnam, after the periods of hyperinflation (1954-1975; 1973-1975; 1985-1989)¹, the value of the Vietnamese currency was significantly devalued. In this case, based on the analyses of post-Keynesian authors, we can see that the reason for the substitution of the national currency for the foreign currency in this context can be explained by the preference for liquidity, which is a preference for holding highly liquid assets with stable values (Charles and Marie, 2016). If the value of the domestic currency is not stable due to high inflation or depreciation, foreign currencies can better satisfy the liquidity preference. Subsequently, the use of the dollar (or another foreign currency) as a unit of account is observed, followed by an increased tendency to make payments in foreign currency. In addition, the volatility of the inflation rate and the exchange rate has strongly influenced the objectives of balance of payments stabilization and economic growth².

¹ During the period 1954 to 1975, in southern Vietnam, the inflation rate was very high because the money supply was growing too fast (the United States was paying too much money in the form of subsidies to the Saigon government). Between the end of 1973 and 1975, there was an economic crisis in both Vietnam and the United States, which led to a reduction in subsidies, which caused inflation to exceed 200% in South Vietnam.

In 1985, the consequences of the bad policy "Giá - Lương - Tiền" continuously led Vietnam to a situation of hyperinflation. Hyperinflation appeared continuously from 1985 to 1988, with inflation rates ranging from 300% to 800% per year.

In 1986, the inflation rate reached 774.7%, causing economic unrest. Superinflation continued in the following two years (1987: 323.1%; 1988: 393%). In 1989, when the inflation rate was less than 100%, Vietnam had just escaped hyperinflation.

² See balance of payments risk analyses in Vietnam of LE Phuong Ninh (*Tài chính Việt Nam 2014-2015, Ổn định vĩ mô - Hội Nhập toàn diện*, pg. 424-429)

These two variables, including the inflation rate, will also continue to have an impact on imports and exports, as well as on economic growth in Vietnam. Therefore, studies on these two variables are still needed for this country.

This chapter will systematize views on inflation and the exchange rate, the impact of these two variables on the economy and their relationship in economic theories. After that, we will use the vector autoregressive (VAR) model to test the relationship between the inflation rate and the exchange rate. From the results obtained with the VAR model, we can see the impacts of the exchange rate on the inflation rate as well as the bilateral relationship of the foreign exchange reserve and inflation in the period 1995-2016.

Therefore, for developing countries, exports can be considered as an "engine" of economic growth, but in Vietnam, more than 90% of the raw materials needed for production, investment and economic activities must be imported³, indeed, it is necessary to adjust the exchange rate in a flexible and reasonable way to help stabilize inflation, "stabilize prices", by creating consumer confidence.

Based on the reality of the Vietnamese economy (see Chapter 1), the origin of the monetary source (see Chapter 2) and the results of the tests of the econometric model in this chapter, we can propose recommendations on the adjustment of the exchange rate in order to limit its negative effects on inflation, which contributes to the stabilization of economic growth and social stability.

3.1 Review of the literature on inflation theories

Inflation is a common economic phenomenon in countries around the world. Inflation occurs at different frequencies and levels in developed and developing countries alike, in times of economic crisis and also in times of economic development. Inflation is not a neutral phenomenon (CHARLES; MARIE, 2018): it can be, to some extent, a means of contributing to economic development, increasing demand and promoting investment. Yet, when inflation exceeds a certain limit, it will threaten the positive performance of the economy. This is why research on inflation appeared very early in all countries of the world, where currency is introduced and circulates in the economy.

When we talk about the 3 functions of money, inflation often has a direct influence on the two functions, which are the value standard function and the value reserve function. When this happens, it reduces the purchasing power of money, i.e. the value of the goods it allows to acquire, and no longer creates the confidence of the whole population in the reserve of money as a "patrimony" and causes acquisitions to be postponed into the future.

In this section, inflation considerations will be summarized in terms of time and perspectives from different business schools. Inflation is not limited to countries with high GDP, it also prevents many developing countries from covering government expenditure when they rely too heavily on printing money.

³ Giáo trình kinh tế Việt Nam (Vietnamese Economic Manual), pg.369

At the end of the 20th century, in Pindak's studies, when countries had put in place models of the centrally planned economy such as the USSR and Eastern Europe⁴, "*Soviet Russia suffered from inflation, or even for a few years from hyperinflation, almost continuously from 1917 to the 1947 monetary reform. Similarly, the Eastern European communist countries experienced similar post-war inflation until around 1953-1954.*

Economists very early on researched inflation. Most researchers agreed that "inflation is a general and sustained increase in the general level of prices of goods and services across an economy". However, the increase in the general price level is not due to inflation. If the price only increases temporarily and in the short term, for example during the traditional New Year's Eve in Vietnam, it will then fall. It is the result of temporary fluctuations in supply and demand on the financial market.

The two economists Laidler and Parkin confirmed that "*Inflation is a process of continuously rising prices, or equivalently, of a continuously falling value of money*"⁵, we can understand that the purchasing power of money in a country is continuously reduced. Samuelson also stated that "inflation represents an increase in the general price level". The general price level is defined as the average price of the "basket of goods and services" in a country. Each country has different types of goods and services depending on its standard of living and GDP. When the general price increases, the components of the economy will have to pay more for the same type of goods and services in this basket, which proves that the value of the currency or the purchasing power of the currency in this country has decreased.

According to Keynes and the post-Keynesian authors, inflation is shown by the increase in demand resulting from full employment and production factors. When the quantity of goods and services demanded exceeds the quantity of goods offered, a price increase is necessary to restore balance in a market economy (demand inflation). Inflation occurs when there is excess demand for goods and services and supply remains inelastic. The excess of demand over supply results in higher prices, national income rises but only in nominal terms and not in real terms.

Keynes does not believe that the economy is still at full employment, that is, it has not yet reached its potential level. Therefore, before full employment is available, policies must be put in place to increase demand, which is essential for the birth of full employment. Production factors are also needed to promote production (aggregate supply) and create more jobs (aggregate demand), in which case this does not cause inflation (there is no "inflationary gap"). On the contrary, inflationary pressures would have emerged in the case of an excessive expansion in relation to the supply of one or more elements of final demand (consumption or exports, for example). However, Keynes has always argued that demand inflation is necessary for the economy, because if it does not yet reach its level of full employment, it would be a "motivation" for economic development.

⁴ PINDAK Frantisek. L'inflation en U.R.S.S. et en Europe de l'Est, *Revue d'études comparatives Est-Ouest*, vol. 7, 1976, n°3. pp. 7-24.

⁵ Laidler, D., & Parkin, M. (1975). Inflation: A Survey, *The Economic Journal*, 85(340), 741-809

In addition, we can mention a price increase based on cost increases (cost inflation), in this case to distinguish between *real* and *monetary imbalances*. In general, inflation may have come from price increases due to autonomous cost increases, as higher production costs have been passed on to consumers. This can only be achieved during a period of economic growth, when consumers are willing to pay a higher price. We can take an example of cost-inflation analysis based on costs paid in the form of wages (wage inflation): if wages represent a significant share of production and service costs and wages increase faster than productivity, total production costs will increase. If producers can pass on this increase in costs to consumers, the selling price will increase, workers and communities will demand higher wages in advance to meet the increased cost of living, resulting in the price/wage loop [Kaldor (1955-1956; 1966) & Kalecki (1935; 1938; 1942)]. Inspired by Kalecki's work, Charles and Marie provide the following definition of hyperinflation in an open economy: "a very rapid rise in prices and a general tendency to convert units of the national currency into foreign currency"⁶. We can also say that inflation is the consequence of the struggle between workers and capitalists for the sharing of added value. Moreover, inflation may have come from either higher raw material and imported energy costs due to higher exchange rates or limited exploitation, or higher capital costs due to increases in interest rates.

Other authors, such as Hicks, Lange and Keynes, argue that forms of expectations also have an impact on inflation⁷. Every year, all countries in the world experience a certain level of inflation. If there is no change in the economy, this rate can be preserved. In the inertial inflation mechanism, expectations and anticipations play a very important role. As expectations are always the basis for the behaviour of inflation triggers in the economy. Inflation is prevented on the basis of experience and the results of analysis, processing of information obtained from previous periods and the government's economic policies. Since then, economic sectors will plan their activities in line with expected inflation. In fact, they will raise the price to the level of expected inflation.

In fact, when we talk about the monetary sphere (monetary imbalances) in order to explain inflation, we must start with the classical and neoclassical authors who founded the quantitative theory of money, which showed that, under certain conditions, the general price level is strictly proportional to the money supply. Inflation comes from excessive money creation. As the general price level depends only on the quantity of currency in circulation. Faced with the rise in prices in England at the beginning of the 19th century, the classics considered that English inflation had "real" causes, but the Bullionists admitted that it was the excessive issuance of inconvertible currency that caused the rise in commodity prices, the fall in the exchange rate and the increase in the price of gold. The phenomenon of excess money creation has been demonstrated by the devaluation of the national currency in an economy, compared to other instruments, such as gold or currencies. In the market, households do not want to have savings or send money to banks, they want to invest directly in commercial activities or withdraw all the money to buy gold and real estate. As a result, the banking system is seriously lacking in liquidity, while the market is flooded with money. Loan applications to banks are rejected for lack of security.

⁶ Charles, S. and Marie, J. (2016): "Hyperinflation in a small open economy with a fixed exchange rate: A post Keynesian view", *Journal of Post-Keynesian Economics*, 39(3), 1-26.

⁷ FRISCH H. (1983), *Theories of inflation*, Cambridge (U.K), pg.20

The money supply of each country has a major influence on production, employment and prices in that country. The central bank can use its control of money supply to stimulate the economy when economic growth is slower than expected, or restrict it when prices rise faster than expected. When monetary policy is well managed, the economy's output can steadily increase with stable prices. If there is a problem in the monetary system, the quantity of money can increase or decrease very quickly, leading to inflation or recession.

In detail, in order to show more clearly the role of money supply, we can recall Fischer's equation: $M \cdot V = P \cdot T$ (1)

Where M is the money supply, V is the speed of money, P is the general price in the economy, T is the real volume of transactions with the assumption $T = Y$. Assuming that the economy is in full employment, there will be aggregate supply: $AS = Y$ (2) and aggregate demand AD is determined:

$$AD = (M \cdot V) / P \quad (3)$$

The balance of the goods and services market is achieved when $AS = AD$, so the Fischer equation can be written as follows: $M \cdot V = P \cdot Y$ (4)

When there is a percentage change, the above equation can be rewritten as follows:

$$\ln M + \ln V = \ln P + \ln Y \quad (5)$$

$$\Delta M + \Delta V = \Delta P + \Delta Y \text{ equivalent to } \Delta P = \Delta M + \Delta V - \Delta Y \quad (6)$$

Assuming that V is constant, this variable depends on the development of the financial system, which does not change immediately. Fischer adds to hypothesis V is a long-term constant. Therefore, when the monetary speed is constant, all changes in the money supply will lead to a change in nominal GDP. Since factors of production and production functions determine real GDP, each change in nominal GDP is reflected in the change in the general price level. The above argument shows that the evolution of the general price level is compatible with the evolution of the money supply

Based on these analyses, Friedman's monetarists and the Chicago School developed the new quantitative theory of money. They discussed the relationship between money supply movements and price fluctuations. In addition, they stated that inflation is a monetary phenomenon that creates excess demand for cash in real terms relative to the volume of money in circulation. In other words, the money supply in the economy is a little "heavy" to keep up with the limited quantity of goods and services. This theory was explained by the principle of a neutral currency. This principle states that the increase in the money supply has absolutely no impact on the quantity of goods and services and on the number of jobs.

Friedman argues that "inflation is always and everywhere a monetary phenomenon", whose responsibility is based on state policy. This inflation can be avoided by controlling the monetary stock. Traditional monetarism still considers the money supply as an exogenous variable. Thus, Friedman argues that monetary authorities must anticipate and announce the growth rate of a

monetary aggregate for a sustainable period. So far, most economists around the world have agreed to define inflation according to the two fundamental points of Samuelson and Friedman⁸. Therefore, the research in this chapter will follow Friedman's view of inflation, among other things.

Friedman argues that in order to curb inflation, it is necessary to curb the growth of the quantity of money and, in order to avoid inflation, the velocity of money circulation must be associated with real output growth. In 1972, Tobin drew inspiration from Friedman's inflation-based approach, saying that the difference between real and potential output is also a cause of inflation.

In summary, although they address the analysis of the source of inflation from different angles and under different causes, economists all agree that inflation occurs when aggregate demand for goods exceeds their aggregate supply in the economy.

It is an imbalance in supply-demand relationships. The main reason is that demand is growing too fast while supply is not increasing (or is increasing slowly). Monetarists say that the quantity of money is the root cause of demand inflation. Assuming that AS is constant, the economy is always at the level of potential output, when money supply increases, it leads to an increase in overall demand for goods and services while their supply cannot be increased, because the economy is at a potential level of full employment. Therefore, it is natural that prices increase in line with the growth of the money supply, which will lead to inflation.

It can be seen that the phenomenon of price increases based on excess demand occurs when factors change the curve of aggregate demand to the right (or when there is an increase in demand in the economy, often including the increase in the money supply). First, to support economic growth, government often increases public spending, or the private sector increases the investment needed to increase production because when household income increases, household consumption increases. Second, if the share of exports increases, it is the cause of the economy's overall demand growth. If the value of one of the explanatory variables in the equation below increases, the economy's overall demand will also increase, assuming that the other factors are constant.

$$Y = C + I + G + (\text{Exports} - \text{Imports})$$

When demand increases rapidly while supply is insufficient, the general level of prices in the economy will increase. Second, the money supply and product exports will affect the country's foreign exchange reserves. Since exports are a source of foreign currency, they increase foreign exchange reserves. In some cases, countries can increase their money supply to buy more currencies in order to increase their foreign exchange reserves (for example, currencies from FDI projects are converted into national currencies). For the phenomenon of inflation resulting from a

⁸ "Friedman only accepts approaches to excess demand as a source of inflation. Thus, unlike Samuelson and Solow's analysis, full employment and price stability are not contradictory policy objectives in Friedman's analysis. For him, an arbitrage between inflation and unemployment only appears during surprise inflation" Cf. Johannes A. Schwarzer, "Samuelson and Solow on the Phillips Curve and the "Menu of Choice": A Retrospective", *Oeconomia*, 3-3 | 2013, 359-388.

rise in costs, it is often due to factors that increase production costs or cause the global supply curve to shift to the left.

First of all, it is necessary to talk about the factors of production that are often inputs to production processes such as the price of raw materials, fuel (electricity, gasoline), labour costs and the cost of the loan are reflected in the interest rate. As interest rates rise, investment projects will become more expensive and production expansion will be halted. When the value of one of the factors changes, it will affect the overall supply of the economy. In the event that the increase in imports is limited to compensate for the shortage of supply due to domestic production, the general price level would increase on the domestic market.

Second, production instability also leads to a decline in supply; in agriculture, natural disasters and epidemics can be the cause of productivity instability. In the manufacturing sector, instability in input supplies, such as rising commodity prices or political instability in oil-exporting countries, can also cause supply shocks⁹. Technological changes may also be a reason in this case, for example, an uncertified technology that cannot be used to produce goods when it would be more economical for the manufacturer. Monopolies are also a cause of reduced supply in the economy, which refers to the concept of marginal profit (marginal revenue - marginal cost), monopolies will only produce the quantity of goods that will bring them the highest profit, no highest turnover, there will be a shortage of goods, while the economy has not reached the potential production level.

In addition, the change in the structure of the economy will result in a difference in income between sectors of the economy. This will result in a shift of labour from the low-income sector to the high-income sector, specifically from the agricultural sector to the industrial sectors. This creates shortages in some key agricultural products and high wages in other sectors will raise the overall price level in the economy, a situation that is glaring in the Vietnamese economy.

Among the factors influencing inflation, it can be seen that the exchange rate plays an important role, with exchange rate fluctuations affecting production inputs. For sectors that have to import inputs, the exchange rate will pass through the input production channel and affect production prices. In particular, for countries that have to import oil, the change in exchange rates will cause the price of oil to change immediately, especially in market economies. The difference between national interest rates and interest rates on the international financial market will change the flow of short- and medium-term investments in this country. In the event of a sudden change in foreign currency inflows into the financial market, abnormal fluctuations in the exchange rate of that country will occur. When the exchange rate changes, the supply and demand for import and export products on the domestic market are also changed, as the price of imported and exported products depends on the exchange rate. In reality, each country needs a certain amount of foreign exchange reserves, which allows the central bank to intervene in the foreign exchange market when necessary and to meet the economy's import and export demand. When the increase or decrease in foreign exchange reserves occurs, there will be an impact on the money supply and the exchange rate. In the opposite direction, when the exchange rate changes, foreign exchange reserves and money supply (as well as inflation) are also affected. To fight inflation, many banks have sold

⁹ The typical example is that of increases in the price of petroleum products (1973-1974 & 1979-1981)

foreign currency to collect national currency in order to reduce the amount of cash in circulation in the economy.

3.2. Reflections on the exchange rate

International trade was born very early, sales and purchases were made in precious metals (gold, silver). However, when the currency is introduced into the payment system, traders need an exchange regime between currencies. In the trend towards an open economy since the mid-twentieth century and in the direction of globalization in the twenty-first century, international trade has grown strongly. To convert currencies between countries, it is necessary to have an exchange rate system. To have an overview of the exchange rate in order to adapt it to the current situation, when countries' financial markets are more closely linked, it is necessary to take into account exchange rate concepts.

The exchange rate is an economic concept derived from the need to exchange goods and services directly derived from currency and monetary relations between countries / regions. Therefore, the exchange rate plays a very important role in international trade activities, through this rate, we can compare the prices of goods and services of countries around the world.

According to Mishkin, "the price of one currency in term of another is called the exchange rate". The State Bank of Vietnam law, adopted on 16 June 2010, clearly states that "the exchange rate of the *dong* is the price of a unit of a currency in a Vietnamese currency unit". From the above concepts, it is generally understood that the exchange rate is the conversion rate/rate of comparison from one currency to another, between countries/regions of the world. Or, more simply, the exchange rate is the parity of a currency that expresses the value of a defined currency against a monetary standard. The exchange rate is fixed on the foreign exchange market where currency supply and demand are compared.

Currently, there are two quotation systems, dual price quotation (bid and ask price) and uncertain or certain quotation. For the first quotation system, the bid price is the price at which the bank is willing to buy a currency, the ask price is the price at which the bank is willing to sell a currency. For the second rating system, certain rating is referred to as certain rating when a unit in domestic currency is quoted in foreign currencies, i.e. the domestic currency is fixed at one unit, while a foreign currency acts as a valuation with the number of units following changes according to developments in the foreign exchange market. For example, in the United Kingdom, the exchange rate is quoted as follows, $GBP\ 1 = USD\ 1.27$. Moreover, when we talk about the uncertain quotation, it indicates the equivalent in national currency of a unit in foreign currency. At that time, the foreign currency will play the role of a unit, while the national currency of that country will be the valuation price. In reality, this quotation is often used in most countries. For example, Vietnam indicates the exchange rate as follows: $USD\ 1 = 23,311\ dong$ and $EUR\ 1 = 26,286\ dong$ ¹⁰.

In this chapter, in order to be able to discuss the analysis of the Vietnamese market, the exchange rate will be analysed according to the quotation on the Vietnamese foreign exchange market. The exchange rate $VND/USD = 23,311$ means that $1\ USD = 23,311\ VND$. If the exchange rate increases, it means that the *dong* depreciates against the US dollar, while the exchange rate

¹⁰ The figures are taken from the daily statistics on the site: <https://www.xe.com/currencyconverter/>

decreases, which means that the *dong* appreciates against the US dollar. To provide a basis for determining the exchange rate between the two currencies, economists around the world often use two main instruments, the purchasing power parity theory (PPP)[Cassel (1920)], representing the goods and services market, and the interest rate parity theory[Keynes (1923)], representing the money and financial market.

In order to understand the impact of the exchange rate, it is necessary to understand the nature and objectives of macroeconomic policy from a macro perspective in order to stabilize domestic prices and stabilize the financial market, while in the micro aspect maintaining the international competitiveness of domestically produced goods. At the same time, exchange rate stability will generate confidence among trading partners and the public that the value of the national currency in the internal and external balance will remain stable.

Exchange rate policy always goes hand in hand with the monetary policy of each country, it includes the activities of the authorities which, through the exchange rate mechanism and the intervention tool system, make it possible to change the exchange rate parity. The government or the BEV uses them to influence the national currency and intervene in the foreign exchange market in order to have a positive impact on import and export activities in that country. The exchange rate is a relatively important variable for the economy, it is the engine of growth, especially for exporting countries. Therefore, in the trend towards globalization and free trade, countries are still using the exchange rate as an effective tool to regulate import and export activities in that country.

An exchange rate policy must emphasize the importance of establishing a clear and reliable anchor to stabilize domestic prices and financial markets. In addition, exchange rate policy must also aim to maintain the international competitiveness of export products, so that it is also associated with economic growth variables. From this point on, the exchange rate policy objective can be generalized as follows:

- Examine the purchasing power of the national currency: if other factors are assumed to be constant, as the exchange rate increases, imported products will be more expensive and the overall price level of the economy will increase, which is one of the causes of inflation. This can be seen from the formula below, if P is called the general price level of the economy, then P is calculated as follows:

$$P = \alpha P_D + (1 - \alpha)eP^*$$

In which:

α is the proportion of goods produced and consumed in the country

$(1-\alpha)$ is the proportion of imported goods

e is the exchange rate

P_D is the price of goods produced in the country in local currency

P^* is the price of imported goods

Assuming that other factors are constant, when the central bank raises the price of the national currency or devalues the national currency, the general level of economic prices will be affected. When the inflation rate reduces the purchasing power of the national currency, if the exchange rate remains constant, domestic goods will be more expensive than foreign goods, leading imports to increase, creating an imbalance in the trade balance, followed by a shortage of foreign exchange. In order to avoid this situation, it is imperative to change the exchange rate, in this case adjust the national currency against foreign currencies.

- Promote economic growth by increasing exports: assuming that other conditions remain unchanged, when the devaluation of the national currency will stimulate exports and limit imports. This will directly increase national income, as we can see from this formula:

$$Y = C + I + G + (X - M)$$

Y: national income, I: investment, C: consumption, G: government expenditure, X: export and M: import.

However, to achieve this, it is necessary to have preconditions in the economy, such as export production capacity, import substitutes and export markets.

In addition, the tools that the Central Bank can use to regulate exchange rates are direct and indirect tools that affect the foreign exchange market, such as:

- Foreign exchange market operations: The Central Bank trades foreign currencies on the foreign exchange market in order to maintain the desired exchange rate. If you want the local currency to fall, the central bank can sell it on the market. This means that the increase in money supply and foreign exchange reserves will increase accordingly. On the contrary, when it wants to increase the national currency, the BEV will sell currencies to buy the local currency. In order to be able to intervene in the exchange rate on the foreign exchange market, the central bank must have significant foreign exchange reserves, but the BEV's capacity to intervene is proportional to its foreign exchange reserves. This intervention must follow the economic rules of the market, the future direction of economic development, the money market and the prices of each country.

- Interest rate adjustment: when using the interest rate calculation tool, the BEV wants to create an instant change in the exchange rate. When domestic interest rates change, the return on domestic and foreign currency assets will change, which will affect international investment flows. Of course, investors will themselves choose a currency with a higher interest rate. Second, the demand for and supply of assets in domestic and foreign currencies will change, leading to a change in the exchange rate. For example, assuming that other factors remain unchanged, when the central bank raises interest rates, short-term capital flows in the international financial market will go to the country, components that hold foreign currency in the country will also switch. If interest rates are higher, the local currency will appreciate or exchange rates will fall. Conversely, when the central bank reduces its interest rates, the exchange rate will increase. As interest rates are a very sensitive tool and cannot change constantly, they will have a negative impact on the economy if there are false expectations about exchange rate movements.

- Amplitude of exchange rate fluctuations: In conjunction with the official exchange rate announcement, the Central Bank may apply a fluctuation band for each period, thus allowing the exchange rate on the interbank market as well as the exchange rate of transactions between banks and customers fluctuating within this range. When the BEV applies a narrow margin, it shows that the economy is under pressure on the supply and demand for foreign exchange and that it must closely monitor the functioning of the foreign exchange market. The easing of the fluctuation range occurs when the market stabilizes or the country's foreign exchange reserves are large enough.

- Devaluation measures of the national currency: a devaluation consists in reducing the value of the national currency of the Central Bank in order to improve the current account balance. Devaluation is also considered to be a sudden decline in the value of a currency relative to another country's gold or currency. At present, there is no specific limit in the world between devaluation and monetary devaluation adjustment. Unlike exchange rate adjustment, currency devaluation is a strong and extreme measure, often used in special cases. The devaluation of the currency has the direct effect of improving the trade balance deficit situation. However, the improvement in the trade balance deficit depends on other factors. Devaluation will be detrimental to holders of national currency and will benefit those who hold foreign currency. For countries with high dollarization, the dollarization situation will worsen. Therefore, when taking the decision to devalue the national currency, the Central Bank must take into full account relevant factors such as the stability of the economy, import and export activities and the people's beliefs in the national currency, social and psychological development when there is a declaration of dumping.

- Measures to increase the price in local currency: when the central bank has an impact on the official exchange rate to increase the value of the national currency in relation to the foreign currency. A country must increase the value of the national currency when the trade balance increases and is under pressure from deficit trading partners, thereby limiting the depreciation of the foreign currency in their countries and slowing the high-growth economy (encouraging import and export restrictions). Countries often do not want to raise the price of the national currency, if they are not obliged to do so, due to external pressures.

- Use of a foreign exchange reserve fund: this is the last measure that the BEV must use to prevent an imbalance in the supply and demand of foreign exchange on the market. Therefore, if a country's foreign exchange reserves are relatively small, it is difficult to protect the value of the national currency under pressure from market forces, usually speculators invest in large quantities. The use of foreign exchange reserves to intervene under normal conditions is unnecessary and ineffective. As a result, central banks today make very little use of this direct intervention. In general, the Asian economy tends to maintain larger foreign exchange reserves than Latin American countries.

3.3. Studies of the relationship between inflation and the exchange rate

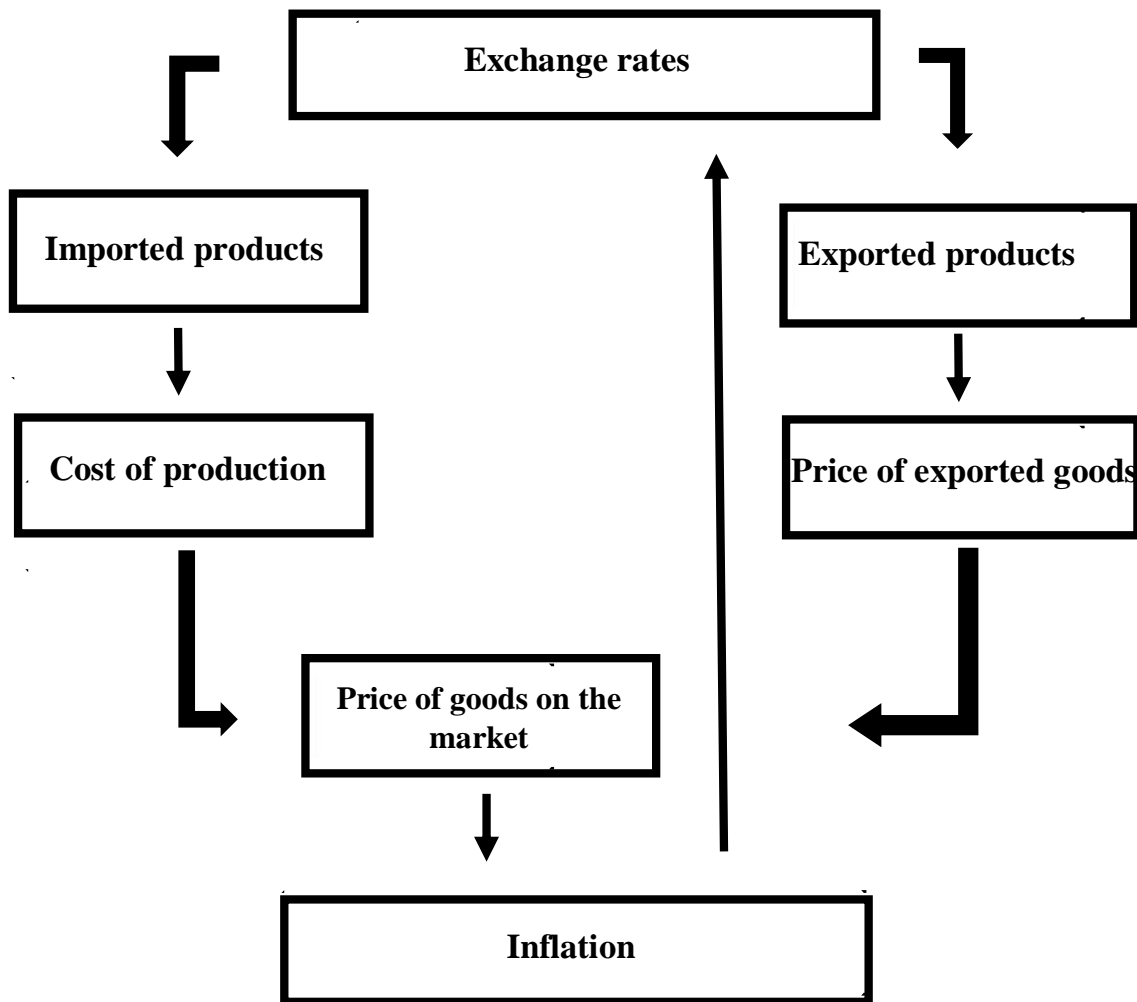
In theory, if the exchange rate can be kept stable, public confidence in the national currency can be increased, particularly in countries with high levels of "dollarization" in the financial system¹¹. In the relationship between inflation and the exchange rate, the question is which index is the cause and which index is the result. In order to answer this question, it is necessary to identify the factors driving inflation and the factors affecting the exchange rate. Some researchers, in their

¹¹ For more detailed analyses, see Ponsot J-F. (2002 p.14-17)

studies, suggest that exchange rate stability is necessary to control inflation. However, the exchange rate, in particular the situation of the Vietnamese economy, is one of the main factors influencing the main inflation rate. For example, when monetary policy is weak, although it can stimulate exports, it also contributes to cost inflation in Vietnam. Vietnamese production is now heavily dependent on imported materials such as oil, cement, iron, steel, machinery, etc. When the value of the dollar increases, there is an increase in the price of imported goods essential for *dong* production, which will cause the increase in domestic production costs, leading to an increase in the price of goods on the market.

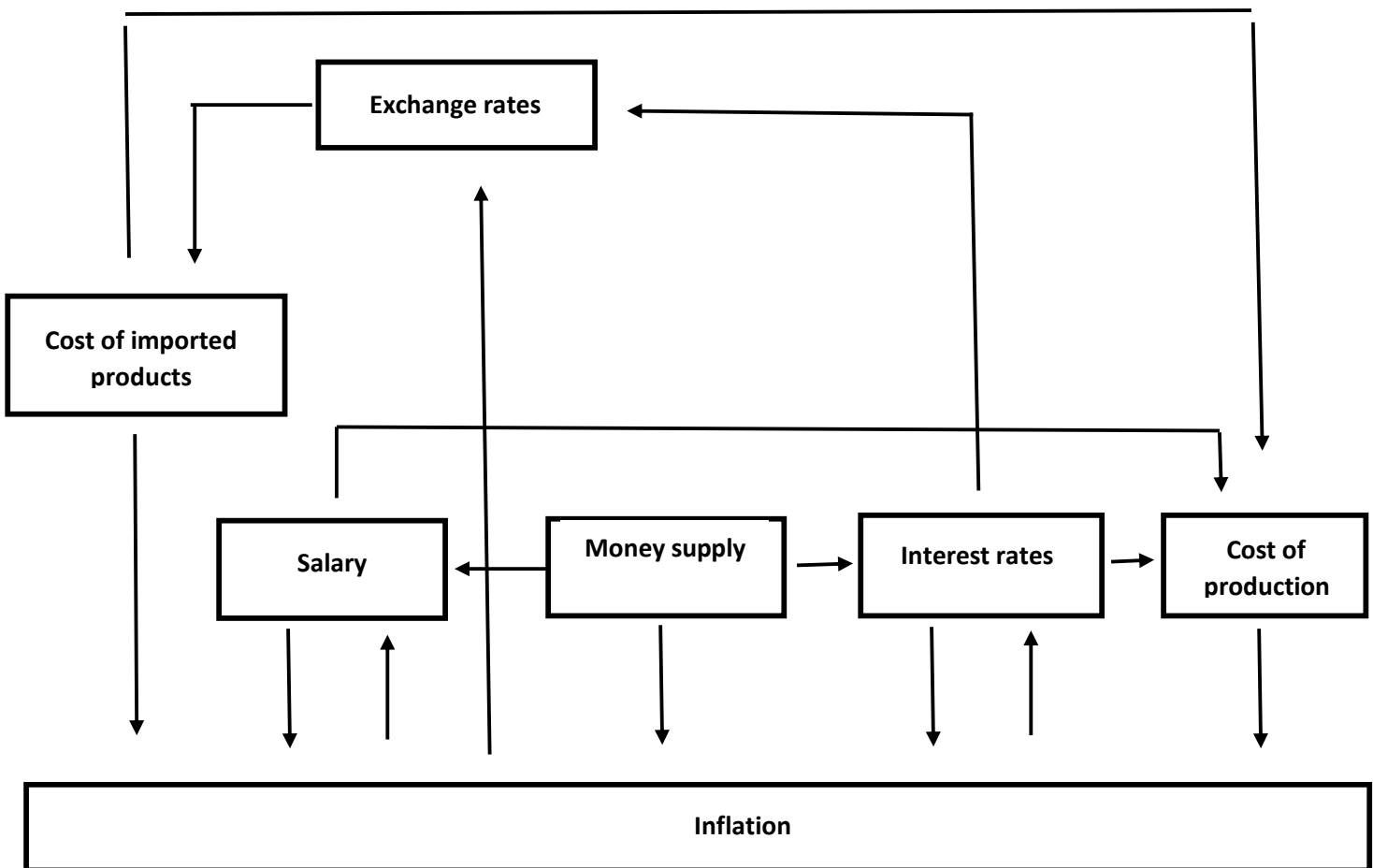
The factors affecting both exchange rate and inflation variables are commodities, interest rates and foreign exchange reserves. Commodities and interest rates will influence the production prices of goods and services in the economy. As the price of these inputs increases, the overall price of the entire economy will increase, leading to higher inflation. At the same time, it will also lead to a fall in exports, as domestic products become more and more expensive, and price competitiveness will decrease. If this happens, foreign currency earnings from product exports will decrease, which will affect the supply of foreign currency on the foreign exchange market.

We can describe the above phenomenon through the diagram below



The above diagram shows that when the exchange rate increases due to a specific cause, it leads to an increase in the price of goods, imported materials also increase when they are converted into national currency. As a result of this phenomenon, the general level of domestic product prices will increase. At the same time, when the exchange rate increases, the price of export products becomes cheaper and demand for export products increases. If producers prioritize exports over domestic sales, this will lead to shortages of aggregate domestic demand and demand for replacement of exported goods. This leads to a general increase in prices in the economy. Conversely, when the inflation rate changes, business activities will be affected. Under the transmission mechanism, these commercial activities will affect the money supply and demand for money, and then they will affect the exchange rate.

Since the early 1960s, economists around the world have studied the relationship between two inflation variables and the exchange rate. However, due to the different economic, political and socio-cultural characteristics of each country, the evolution of inflation and exchange rates varies from one country to another. Therefore, studies on inflation and exchange rates using qualitative, quantitative or a combination of the two methods of macro variables in each economy are always required for each country. Horska (2004) in her research synthesized the relationship between inflation and the exchange rate as a synthesis of factors, as shown in the diagram below.



Inflation will affect real wages and interest rates, while these two factors affect the overall production price of the economy. In addition, interest rates also have an impact on the exchange rate, as the difference in interest rates between countries will lead to a change in international capital flows. This will lead to a change in the supply and demand of foreign currencies on the foreign exchange market.

The relationship between inflation and the exchange rate can be considered a two-way relationship. It is also an image of the relationship between macro variables in the economy. Therefore, when selecting a tool to study the relationship between these two quantities, the thesis should pay attention to the characteristics mentioned above.

The research of Kara, Nelson (2002) "The Exchange rate and Inflation in the UK" formulated the following formula:

$$P_t = s_D P_t^D + s_M P_t^M$$

Where: P_t is the consumer price index in quarter t , P_t^D is the price index of goods produced and consumed on the domestic market in quarter t ; P_t^M is the import price index in quarter t ; $s_D = (1 - s_M)$ is the proportion of goods produced in the country in the CPI and s_M is the proportion of imports. From equation 1, it is possible to convert the percentage equivalent to the following equation:

$$\pi_t = (1 - s_M)\pi_t^D + s_M\pi_t^M$$

Where π_t is the inflation rate in quarter t , π_t^M is the global inflation rate in quarter t

According to purchasing power parity theory or the single price rule, if all domestic products can participate in trade, there will be a balance between the domestic price index and the world price index via exchange rate adjustments, from which the equation of the third form is expressed as follows:

$$\pi_t = 1 - s_M\pi_t^D + s_M\pi_t^M = 1 - s_M\pi_t^M + \Delta s_t + s_M\pi_t^M + \Delta s_t = \pi_t^M + \Delta s_t$$

Where Δs_t is the change in the nominal exchange rate calculated per quarter t . It should be noted that in equation 3, the author estimated that the import price index reflected the change in the general world price index. If the domestic inflation rate is higher than the global rate, the exchange rate will adjust so that equation 3 is still in need. The results of this study are similar to those of Thygesen's (1977) study, suggesting that the exchange rate fluctuation is close to the difference in inflation rates between European Union countries. However, this theory is based on unrealistic assumptions that ignore the effects of transport costs and tariffs.

In addition to research on global inflation and exchange rates, Vietnamese economic research organizations, universities and economists also conduct research on Vietnam's inflation rate and exchange rates in each different period.

Thi Tuan Nghia (2004) published the study "Hoàn thiện cơ chế điều hành tỷ giá nhằm nâng cao hiệu quả chính sách tiền tệ tại Việt Nam" (Completing the exchange rate management mechanism to improve the effectiveness of monetary policy in Vietnam). This study focuses on the analysis of monetary policy instruments such as open market operations, reserve requirement ratios, interest rates and exchange rates. The author focuses on two analytical contents, which constitute the operating mechanism of the exchange rate and monetary policy in Vietnam. In this paper, the author draws on the experience of the United States, South Korea and China to cite the application of monetary policy instruments in Vietnam.

In 2011, Viet Trung, Nguyen Thi Thuy Vinh conducted the study "The impact of oil prices, real effective exchange rate and inflation on economic activity: Novel evidence for Viet Nam". This study used macroeconomic data from 1995 to 2009 to include the VAR model to test the relationship between oil prices, inflation and exchange rates in Vietnam during this period. The study confirmed a long-term relationship between these macro variables.

It can be seen that, so far, many studies on inflation and the exchange rate with other macroeconomic variables have been conducted around the world and in Vietnam at various times using different research methods. However, due to the economic, political and socio-cultural characteristics of each country, inflation and exchange rates also vary between countries. Therefore, qualitative, quantitative or a combination of the two methods of macro variables in each economy are always required for each country. In Vietnam, after 1986, the Vietnamese economy was built in the direction of a market economy based on socialism. In particular, the State plays a role in regulating the economy by taking decisions on economic, political and social development orientations. At present, the State Bank still retains a role in exchange rate regulation, with fuel prices remaining controlled by the government in order to stabilize the economy. This is a different characteristic from other countries in the region and the world. From 2009 to 2015, the Vietnamese economy became deeply integrated into the global economy.

3.4. Model and Discussion of the results

3.4.1. Model

To determine the interaction of macro factors: the inflation rate and the exchange rate, this chapter will use the vector autoregressive (VAR) model to test the relationship between the two factors. The vector autoregressive model allows to test the effect of independent variables on the dependent variable, the VAR is actually the connection of two methods: autoregression (AR) to the multivariate case and simultaneous equations (SE). The VAR is a good model for taking advantage of RA: it is easy to estimate using the residual minimization method (OLS), but it takes advantage of the ES to estimate several variables in the same system. At the same time, it eliminates the disadvantages of social entities, which do not necessarily have to worry about the endogeneity of economic variables. In other words, macroeconomic variables are often endogenous when they interact with each other. This property causes the classical regression method to use a multiple regression equation when it is biased in the estimation. These are the fundamental reasons why VAR is popular in macroeconomic research.

The VAR model examines the relationship between different time series, which is a very specific model of systems of autoregression equations. When we talk about the representation of

the VAR in which we consider two variables y_1 and y_2 . Each of these variables is a function of its own lagged values and those of the others. Autoregressive models are used in the VAR in which the delayed variable is the endogenous variable and the exogenous variables appear with several lags.

The structural form of the VAR representation is written:

$$y_{1t} = a_1 + \sum_{i=1}^p b_{1i}y_{1t-i} + \sum_{i=1}^p c_{1i}y_{2t-i} - d_1y_{2t} + \varepsilon_{1t}$$

$$y_{2t} = a_2 + \sum_{i=1}^p b_{2i}y_{1t-i} + \sum_{i=1}^p c_{2i}y_{2t-i} - d_2y_{1t} + \varepsilon_{2t}$$

Where y_{1t} and y_{2t} are considered stationary, innovations ε_{1t} and ε_{2t} are white noises of constant variances $\sigma_{\varepsilon_1}^2$ and $\sigma_{\varepsilon_2}^2$ and not self-correlated. Indeed, it appears that it is not in reduced form, y_{1t} has an immediate effect on y_{2t} and vice versa y_{2t} has an immediate effect on y_{1t} . We can see that the vector process $Y_t = (y_{1t}y_{2t})'$ can be written as an AR process (p). With :

$$B = \begin{bmatrix} 1 & d_1 \\ d_2 & 1 \end{bmatrix} \quad A_0 = \begin{bmatrix} a_1 \\ a_2 \end{bmatrix} \quad A_i = \begin{bmatrix} b_{1i} & c_{1i} \\ b_{2i} & c_{2i} \end{bmatrix} \quad \varepsilon = \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \end{bmatrix}$$

In matrix form, this model becomes:

$$BY_t = A_0 + \sum_{i=1}^p A_i Y_{t-i} + \varepsilon_t$$

Where $Y_t = (Y_{1t}, \dots, Y_{kt})$ Vector of "k" endogenous variables, where each variable constitutes an equation or variable whose value is given by the system.

A_0 vectors of "k" constant system terms ("k" constant terms in case of k variables).

A_i Square matrix of order "kxk" of the coefficients

In the standard form, the model is written:

$$y_{1t} = a_1^0 + \sum_{i=1}^p a_{1i}^1 y_{1t-i} + \sum_{i=1}^p a_{1i}^2 y_{2t-i} + \vartheta_{1t}$$

$$y_{2t} = a_2^0 + \sum_{i=1}^p a_{2i}^1 y_{1t-i} + \sum_{i=1}^p a_{2i}^2 y_{2t-i} + \vartheta_{2t}$$

In this model, each equation has p offsets of each variable. With 2 variables, we have 2^2p of correlation coefficient. If we have the generalization of the VAR representation with k variables and p offsets (noted VAR(p)), there will be k^2p of coefficient. This means that, when the quantity of k increases, we also have to increase the estimated coefficient quantity.

The condition for the existence of the VAR model is that the variables over time must be stationary - that is, the mean, variance and covariance have both the same lag. Thus, the coefficients of the VAR process can only be estimated from stationary series, either by difference, prior to the estimation of the parameters in the case of a stochastic trend, or it is possible to add a trend component to the VAR specification, in the case of a deterministic trend (BOUBONNAIS, 2015). The VAR model has the advantage of capturing the variation in model parameters over time, and thus allows us to better capture the dynamics of the system, which helps us to analyze the effects of economic policy or macroeconomic forecasts (the socio-economic environment), through random shock simulations (innovations) and the decomposition of error variance.

In fact, there are advantages to the VAR model. If the limitation of the ARIMA model is that it only performs an analysis on one time series, the VAR model allows different time series to be examined. This helps researchers to analyze many different series and take into account their relationships. In addition, the VAR model also has the advantage that it is not necessary to determine which variables are endogenous and which are exogenous (endogenous and exogenous variables are necessarily known). We can also use the OLS method to estimate each of the equations in the VAR process. By allowing endogenous interactions between system variables.

In addition, the VAR model also has disadvantages. When examining it, we must consider the stationarity of time series in the model. When estimating the VAR model, it is imperative that all series be stationary. Otherwise, as mentioned above, the difference must be realized to ensure stationarity. In addition, there is also the difficulty in the appropriate time frame to choose. Suppose that the VAR model envisages having three variables and that each variable will have five offsets included in each equation. As indicated above, the number of coefficients to be estimated is $3^2 * 5 + 3 = 48$. If the number of variables is increased and the number of delays included in each equation, the number of coefficients to be estimated is quite large. In addition, the analysis carried out by the VAR model assumes the constancy of the economic environment "all other things being equal". Indeed, the time series analyses that are carried out simultaneously in the VAR process do not give us a reality of the economic situation, they can cause a bias in economic policy.

3.4.2. Model estimation process

When using the VAR model, this chapter aims to determine the strength of the impact of inflation on the exchange rate by the coefficients of the VAR model. To achieve this objective, it is necessary to test the VAR model in the following order: (i) checking the stationarity of time series, (ii) determining the number of lags of variables in the model, (iii) checking causality to detect a link between variables, (iv) analyzing the orthogonalization of "shocks", with the impulse response function to measure the impact of a change in an innovation on the variables. We also need to apply the variance decomposition to calculate for each of the innovations its contribution to the variance of the error.

First, we begin by checking the stationarity of time series. A common problem with macroeconomic variables is that they often fluctuate over time, the condition to be included in the VAR model is that the time series must be stationary, i.e. its expectation and variance - is unmodified over time. Formally, the stochastic Y_t is stationary if:

$$E(Y_t) = \mu \quad \forall t \text{ and } \forall m \text{ the average is constant and independent of time}$$

$$\text{Var}(Y_t) < \infty \quad \forall t \text{ the variance is finite and time-independent}$$

$$\text{Cov}(Y_t, Y_{t+k}) = E[(Y_t - \mu)(Y_{t+k} - \mu)] = \gamma_k \quad \forall t \text{ covariance is independent of time}$$

Therefore, this chapter should first use the augmented Dickey and Fuller tests to check the stationarity of all time series included in the model¹². Formally, under the alternative hypothesis $|\phi_1| < 1$ the ADF tests are based on OLS' estimation of the following models:

$$\Delta y_t = \alpha_0 + \beta y_{t-1} + \sum_{i=1}^p \phi_i \Delta y_{t-i} + \varepsilon_t \quad (1)$$

$$\Delta y_t = \alpha_0 + \alpha_1 t + \beta y_{t-1} + \sum_{i=1}^p \phi_i \Delta y_{t-i} + \varepsilon_t \quad (2)$$

Where: $\Delta y_t = y_t - y_{t-1}$

p is the number of delays (offsets)¹³

The difference between the model (2) and the model (1) is that there is a trend variable at time t . The trend variable is a variable with values from 1 to n , where 1 represents the first observation in the series and n represents the last observation. White noise is a term that indicates a random error derived from the classical assumption that it has an average value of 0, the variance is constant and autocorrelation does not exist.

Second, we need to determine the number of delays, in which case, the Akaike and Schwarz criteria can be used to determine the order p of the model. The selection of the order is carried out by estimating all VAR models with an order ranging from 0 to h (h being the maximum delay allowed by economic theory). The AIC(p) and SC(p) functions are calculated:

$$AIC(p) = \ln\left(\frac{SCR_p}{n}\right) + \frac{2k^2 p}{n}$$

¹² Unit root tests (Dickey-Fuller tests (1979)) make it possible to highlight the stationary or non-stationary nature of a chronicle by determining a deterministic or stochastic trend. In its models, the process ε_t is, by hypothesis, a white noise. The increased Dickey and Fuller tests help us in the case, *a priori*, where the error is uncorrelated

¹³ The value of p can be determined according to Akaike or Schwarz criteria, or, starting from a sufficiently large value of p , a model with $p-1$ delays, then $p-2$ delays, is estimated until the coefficient of the ^{pieme} delay is significant (BOURBONNAIS, 2015)

$$SC(p) = \ln\left(\frac{SCR_p}{n}\right) + \frac{k^2 p \ln(n)}{n}$$

With SCR_p Sums of the Residue Squares for the p-delay model

K: number of system variables

n: number of observations available (Each delay results in the loss of one observation)

Ln : logarithm naperian

The delay p which minimizes the AIC or SC criteria is retained.

Third, the Granger test is used to highlight the causal relationship between economic variables at the theoretical level, i.e. which variables are the causes and which variables are affected. Thanks to the Grange test in the VAR model, the direction of causality between inflation and the exchange rate will be clearer in order to give us food for thought for a better understanding of economic phenomena.

Finally, it can be seen that the VAR model results in an assessment of the interaction between the variables included in the model. But if we focus on the result of the VAR model estimation without analyzing the "impulse response function", the link between system variables will not be visible, as shock analysis is an effective tool in analyzing the contemporary relationship between residues, the relationship of errors (to understand the direction of causality), and the impact of a shock on variables. From this, we can see the experiences and analyse the effectiveness of economic policy. In the VAR model, a shock on a variable in the equation not only affects that variable, but also spreads to other endogenous variables through the dynamic structure of the VAR (for example, a variation at a given time of ε_{1t} has an immediate impact on y_{1t} then on y_{2t+1}). The impulse response function will describe the effect of a shock on both current and future endogenous variables.

After the impulse response function, it is necessary to analyze the decomposition of the variance, by choosing the decomposition order, we can calculate for each of the innovations its contribution to the variance of the error.

3.4.3. Variables and database

After joining the WTO, the Vietnamese economy becomes more sensitive and vulnerable to the impact of external shocks, in particular, the prices of goods on the domestic market are easily affected by the price shock of imported products (e.g. gasoline and oil prices, prices of raw materials for production, etc.). The impacts of the financial crisis externally or internally will devalue the value of the *dong* and have a significant effect on the fluctuation of the price of imported products, for domestic production and commercial activities. In addition, changes in the quantity of the national currency have a direct impact on foreign exchange reserves (see Chapter 2). In addition, the control and management of foreign exchange reserves influences foreign

exchange policy, which shows that the exchange rate relationship is becoming increasingly important for monetary policy (the first goal is to stabilize the price as well as the inflation rate).

The logical relationship between two inflation and exchange rate variables:

- The change in the exchange rate will result in a change in the price of inputs to the production process, such as gasoline prices and building materials. It causes foreign currency debts of the government and companies on the international financial market to be changed, even leading to a change in the interest rates on these debts. Everything increases the general price level of the economy.

- When domestic inflation is higher than the inflation of other countries and exchange rates between the two currencies do not change, foreign purchasing power is higher than domestic purchasing power. However, according to purchasing power parity theory, the exchange rate will not remain, but will adjust to maintain purchasing power parity.

In this empirical part, this chapter will use two times series of two variables:

- The exchange rate (e) in Vietnam, between the *dong* and the dollar, because at present, Vietnam's international trade activities with the world's main trading partners use the US dollar as the main currency.
- The inflation rate (π) is calculated according to the CPI

In a market economy, prices are used as a reference to measure economic values and business direction. Economists studying inflation often use indicators to measure the general level of price. In fact, this level is calculated using construction price indicators, which are the average values of consumer or producer prices. The price index is a measure of the general price, which is the weighted average of the prices of many goods and services. When developing this index, planners take into account each type of individual price according to the importance and economic significance of each product, itself associated with a weighting factor for each product in the basket of products. The three most important price indices are the consumer price index, the GDP deflator and the producer price index. Inflation is measured by the Consumer Price Index (CPI), which is considered to be the most widely used measure of inflation. The CPI measures the cost of purchasing a basket of standard goods at different times. This basket of goods includes food, clothing, shelter, fuel, transportation, medical services, school fees, and other goods and services purchased for daily living. Of course, a product will be added according to its importance in the economy. The CPI is calculated according to the following formula:

$$IPC = \frac{\sum_{i=1}^k P_i^t Q_i^0}{\sum_{i=1}^k P_i^0 Q_i^0} \times 100\%$$

With :

k the number of items in the basket of goods

P_i^t is the price of product i of year t

P_i^0, Q_i^0 is the price and quantity of product i in the base year

The inflation rate calculated by the change in the CPI is calculated according to the following formula:

$$\pi = \frac{IPC_t - IPC_{t-1}}{IPC_{t-1}} \times 100\%$$

Since 1994, Vietnam has adopted the calculation of the International Standard CPI. When legalizing the publication and calculating the monthly CPI, it was easier for economic actors to access the index.

The database in this research was created from the IMF's quarterly data collection (International Financial Statistics) in the period January 1996 - December 2015.

Table 3.1. Descriptive statistics of variables

	π	e
Mean	0.015941	0.008807
Median	0.011595	0.002316
Maximum	0.089687	0.089425
Minimum	-0.015351	-0.009603
Std. Dev.	1.425053	0.017129
Skewness	1.425053	2.706458
Kurtosis	5.913641	10.52972
Jarque-Bera	54.68251	279.4879
Probability	0.000000	0.000000
Sum	1.259300	0.686954

Sum Sq. Dev.	0.031416	0.022591
Observations	79	80

Source: Personal analysis by Eviews 8.0

Statistics include centralized measurement values (Mean, Median), normality of a statistical distribution (Skewness - Kurtosis, Jarque-Bera). From the descriptive statistics of the variables, it can be seen that the distribution values of the variables are relatively uniform in terms of values, which makes the test results more meaningful.

Table 3.2. Correlation matrix

	π	e
π	1,000000	0,235309
e	0,235309	1,000000

Source: Personal analyses by Eviews 8.0

In Table 3.2, the matrix of correlations between the variables, we can see that inflation and the exchange rate are quite strongly correlated with each other.

3.4.4. Empirical results of the evaluation of the relationship between inflation and the exchange rate with the VAR model

We see that the relationship between the exchange rate and inflation is a bilateral one. In other words, the error of the inflation variable has the effect of changing the exchange rate and, in the opposite direction, the error of the exchange rate has an impact on inflation.



Time series analyses and structural models concern the simultaneity of relationships and are used to determine the long-term relationship between the variables that should be used in the Vietnamese inflation model. If the variables used in the model are related to each other in accordance with economic theories, they will not deviate from this relationship in the long term. The long-term relationship between inflation and exchange rates that this chapter considers here is the relationship based on purchasing power parity theory.

In this chapter, the VAR model was constructed by the following two equations:

$$\pi_t = a_1 + \sum_{i=1}^p b_{1i}\pi_{t-i} + \sum_{i=1}^p c_{1i}e_{t-i} + \varepsilon_{1t}$$

$$e_t = a_2 + \sum_{i=1}^p b_{2i}e_{t-i} + \sum_{i=1}^p c_{2i}\pi_{t-i} + \varepsilon_{2t}$$

With π_t the inflation rate in period t and it is calculated by the CPI

e_t the exchange rate in period t (*dong* /dollar)

3.4.4.4.1 Checking the stationarity of time series

First, for the construction of the VAR model, one of the conditions is that the residues are alternated, the variance error is constant and the errors have no autocorrelation¹⁴. Then, the other condition for estimating the VAR model is to check the stationarity of the time series used in the model. For this purpose, the study was based on the Dickey and Fuller Augmented test. Correlograms are performed with Eviews, providing the results of the simple (AC column) and partial (PAC column) autocorrelation functions, in order to verify the stability of the Dickey and Fuller Augmented test¹⁵

Assuming with the models:

$$\pi_t = \beta e_{t-1} + \varepsilon_t$$

$$e_t = \beta \pi_{t-1} + \varepsilon_t$$

We can give the hypothesis:

H0 : $\beta = 1$: the process is non-stationary

H1 : $\beta \neq 1$: the process is stationary

It is estimated that $t = \beta/SE(\beta)$ according to the unit root test criteria

If you $|t| > |t_\alpha|$ H0 is rejected and H1 is accepted, the process is stationary

The table below shows the results of the Dickey and Fuller Augmented test for all data series with a difference of 0.

¹⁴ The attached graphs show that the autocorrelation is negative as the residues are alternated.

¹⁵ See Annex 3

Table 3.3. Dickey and Fuller test results Augmented to difference 0

Series	t-Statistic	Critical value*
π_t	-4.633808	-2.899115
e_t	-1.618720	-2.899115

Source: Personal analyses by Eviews 8.0

From Table 3.3 to difference 0, the absolute value of the Dickey and Fuller test result increased by the CPI inflation data series (π_t) is above the critical value at the 5% threshold, indicating that the time series of inflation is stationary at the difference 0.

The exchange rate data series (e_t). In order for the VAR model to be used, the exchange rate data set must test at the first difference, the result of the Dickey and Fuller increased test for this series at the first difference is presented in the table below.

Table 3.4. Dickey and Fuller test results Augmented to difference 1

Series	t-Statistic	Critical value*
e_t	-8.915661	-2.899115

Source: Personal analyses by Eviews 8.0

The exchange rate data series is stationary, the first condition for applying the VAR model is met. Then, we will determine the optimal number of delays for the VAR model using Aikaike criteria.

3.4.4.4.2 Determination of the number of delays

We can determine the optimal number of delays in the VAR model using Aikaike's criteria [AIC(p)]. The delay p which minimizes the AIC criteria is retained. The results are presented in the table below.

Table 3.5. Number of delays

Lag	LogL	LR	MER	AIC	SC	HQ
0	209.4944	NA	9.92e-06	-5.844912	-5.781174	-5.819565
1	385.8103	337.7319	7.74e-08	-10.69888	-10.50767*	-10.62284*
2	390.1937	8.149382	7.66e-08	-10.70968	-10.39099	-10.58295
3	393.6809	6.286896	7.78e-08	-10.69524	-10.24907	-10.51781
4	396.8341	5.506960	7.97e-08	-10.67138	-10.09775	-10.44327
5	402.6442	9.819937	7.60e-08	-10.72237	-10.02126	-10.44356
6	408.8657	10.16471*	7.16e-08*	-10.78495*	-9.956363	-10.45545
7	410.1543	2.032728	7.76e-08	-10.70857	-9.752511	-10.32838
8	414.0691	5.954793	7.83e-08	-10.70617	-9.622634	-10.27528

* indicates lag order selected by the criterion
 LR: sequential modified LR test statistic (each test at 5% level)
 FPE: Final prediction error
 AIC: Akaike information criterion
 SC: Schwarz information criterion
 HQ: Hannan-Quinn information criterion

Source: Personal analyses by Eviews 8.0

The delay p that minimizes the AIC criteria is 6, so we choose the optimal delay of the model is 6. The VAR model used for the study is:

$$\pi_t = a_1 + \sum_{i=1}^6 b_{1i}\pi_{t-i} + \sum_{i=1}^6 c_{1i}e_{t-i} + \varepsilon_{1t}$$

$$e_t = a_2 + \sum_{i=1}^6 b_{2i}e_{t-i} + \sum_{i=1}^6 c_{2i}\pi_{t-i} + \varepsilon_{2t}$$

3.4.4.3. Determination of causality

In economic theory (as well as in the results of other empirical work) the relationship between inflation and the exchange rate is a long-term bilateral relationship. In order to determine the direction of causality between the two variables of the model, namely which variables are the causes and which variables are affected, we will perform the Granger test.

Table 3.6. Granger test results

Pairwise Granger Causality Tests			
Date: 01/20/19 Time: 01:54			
Sample: 1996Q1 2015Q4			
Lags: 6			
Null Hypothesis:	Obs	F-Statistic	Prob.
DE does not Granger Cause INF	73	2.24364	0.0410
INF does not not Granger Cause DE		1.31429	0.2648

Source: Personal analyses by Eviews 8.0

The first hypothesis has the $p - \text{value} = 0.0410 < 5\% < 5\%$ we therefore reject H_0 with a level of significance of 5%, in other words, there is therefore a causality in the Granger sense of the exchange rate (e) to the inflation rate (π). For the second hypothesis, $p - \text{value} = 0.2648 > 5\%$.so there is no reason to reject H_0 at the 5% significance level.

3.4.4.3. Result of the VAR model

With the coefficient of $R^2 = 99.06\%^{16}$, the model is very suitable, which shows the ability to explain the model's inflation variable and the relationship between the two variables. From this result, the VAR model will have been presented as an equation. To analyze the relationship between inflation and exchange rates, the VAR model estimate shows that the following equation is significant:

$$INF = 0,274581 \times INF(-1) + 0,174814 \times DTG(-2) + 0,167736$$

In this equation, inflation and exchange rates can be seen in the same direction from the second half of the year and also in the long run. This shows that these two variables change in the same direction and are influenced by previous cycles.

If this is the case, the importance of the VAR model for research has not been fully understood and the conclusions regarding the relationship between the variables are weak. At the same time, it is impossible to know to what extent the impacts of the variables are positive or negative. In order to understand the interactions between the variables, it is necessary to estimate the impulse response function and the variance decomposition for the VAR model, these two tools will show more clearly the relationship between the variables.

3.4.4.4. Shock" analysis

¹⁶ See Annex 4

The impulse response function will show the reciprocal fluctuations of the variables when there is a variation of an innovation on the variables. In the diagram¹⁷, we can see not only the contemporary relationship but also the sense of causality of the two variables. A change in the exchange rate (e_t) has an impact on inflation (π_t) and vice versa. Thus, an exchange rate shock (e_t) has a contemporary impact on inflation. We can see that inflation and the exchange rate fluctuate in the same direction, and that the transition from one macroeconomic variable to another is about 5 semesters behind. In this study, the confidence level of the estimates was 95%.

The analysis of the "shock" that gives impacts of the exchange rate on inflation showed reasonable results in the case of Vietnam. Current production in Vietnam is heavily dependent on imported materials such as oil and cement, iron and steel, machine tools, etc. In the event of a "shock" to the exchange rate regime or a change in foreign exchange reserves, the exchange rate has a strong influence on inflation (the price rises continuously and for a long time, leading to inflation) and this phenomenon will continue until the following year. The fluctuation in inflation is in line with the exchange rate fluctuations in the following six months. The graph¹⁸ shows us a fluctuation in inflation and the exchange rate in the same direction between January 1996 and December 2015 in Vietnam.

Although the impulse response function provides general statements on the degree of transmission of exchange rates to inflation, it does not represent the share of the contribution of each of the exchange rate innovations to the variance of the inflation error.

3.4.4.4. Variance decomposition

To assess the importance of exchange rate innovations for inflation, we need to implement the error variance analysis method. On the basis of the results of the variance decomposition in Table 3.7, we can see the relatively large impact of the exchange rate on inflation over the period 1996-2015. Even in the first three semesters, the exchange rate explained a variation in average inflation of about 10%. From one year onwards, the exchange rate explains more than the volatility of inflation. Over the long term, the exchange rate accounts for nearly 29% of inflation fluctuations. In addition to the exchange rate factor, "shocks" to the inflation rate in the past also have a significant impact on inflation at the present time, which can be considered as an expectation of market inflation. However, as this anticipation decreases over time, when there are innovations in inflation, starting in the second half of the year, the influence of the previous period at the moment is still about 92% on inflation.

¹⁷ See Annex 5

¹⁸ See Annex 5

Table 3.7. Results of the decomposition of the inflation variance

Period of time	H.E.	DE	INF
1	0.016417	4.172421	95.82758
2	0.021826	7.180517	92.81948
3	0.026025	10.13587	89.86413
4	0.029453	13.02808	86.97192
5	0.032378	15.84412	84.15588
6	0.034948	18.58863	81.41137
7	0.037254	21.26565	78.73435
8	0.039361	23.87646	76.12354
9	0.041314	26.41974	73.58026
10	0.043146	28.89259	71.10741

Source: Personal analyses by Eviews 8.0

It should be noted that, since the number of model delays is equal to 6, this means that changes in model variables will affect the next 6 periods (model data are calculated in semester). It is also a basic feature of macroeconomic policies, which will have impacts after a certain lag. Therefore, the monetary policy that is currently being implemented must be effective over time to promote economic efficiency.

The vector autoregressive model can show that the exchange rate has had a significant impact on the inflation rate in recent times. This corresponds to the reality in Vietnam, when the BEV decided to devalue the *dong* in 2010 and 2011, the inflation rate in 2011 increased to 18.13% from 11.8% in 2010.

Therefore, if the exchange rate is kept stable, there will be no unusual inflation rate "shocks". The results of this study suggest that it is possible to focus on stabilizing the inflation rate in order to maintain exchange rate stability or to adjust it according to market fluctuations.

3.4.5. Recommendations for monetary policy

For an export-oriented economy, while inputs for production activities in the economy must be imported up to 70%, monetary policy management is the main focus. The exchange rate book is flexible enough to help "stabilize prices" in order to create a climate of trust with the public.

After analyzing and verifying the vector autoregressive model, we see the real impact of the exchange rate on relatively high inflation in the past. This is the basis for monetary policy adjustment (exchange rate policy and tools help to stabilize prices). The exchange rate is one of the transmission channels for monetary policy, turning the tools into a reference for monetary policy. The most important is in particular the objective of price stability. The devaluation of the national currency can increase inflation.

3.4.5.1. Adjustments to the exchange rate regime in line with macroeconomic conditions

International economic integration requires economic policies and exchange rate policy in particular to adapt flexibly to the often changing international environment, thus minimizing losses due to negative shocks that result in domestic impacts on the national economy.

The flexible exchange rate helps to limit the increase in money supply and the factors that have caused inflation in the past (2010-2011)

When Vietnam joined the WTO, the amount of foreign investment in Vietnam increased significantly. In principle, when there is more foreign capital inflows into Vietnam, the value of the *dong* will increase to create a balance. However, the BEV has increased the quantity of the *dong* in order to buy back this amount in foreign currency to maintain the exchange rate (against the US dollar) which is below equilibrium. This improves the competitiveness of export prices.

Keeping the value of the *dong* low is a form of export subsidy, but the disadvantage of this policy is that it is necessary to increase the amount of *dong* to buy a large amount of currency. This is a huge increase and a significant inflation factor in recent years. If the exchange rate is flexible, when the exchange rate regime is appropriate, the State will decide to buy US dollars and will benefit from the reduction in the amount of the *dong* to buy dollars to be added to the foreign exchange reserves.

The flexible exchange rate helps the *dong* to follow the market's reaction when the dollar devalues globally.

For the flexible exchange rate in terms of *dong*, even if it can increase exports, contributes at the same time to inflation in Vietnam. In reality, Vietnamese production now depends heavily on imported materials, when there is a depreciation of the US dollar in the world, in other words, the increase in the price of imported goods essential for *dong* production, this will be the main reason for the increase in domestic production costs, leading to an increase in commodity prices. The devaluation of the *dong* against foreign currencies increases the cost of imported goods, leading to a large trade deficit. If the exchange rate is more flexible and therefore the *dong* stronger, it will reflect the trend of the market economy.

3.4.5.2. Small reduction in the value of the dong

In order to contribute to improving the international competitiveness of Vietnamese products and maintaining macroeconomic stability, under current conditions, the depreciation of the Vietnamese dong is necessary to simultaneously improve the internal and external balance of the Vietnamese economy, by effectively exploiting the benefits and minimizing the risks associated with international economic integration. However, in the current context, there should not be a significant devaluation of the national currency for the following reasons:

Although the devaluation of the national currency makes domestic goods more attractive than foreign products, this means that the economy must become more competitive and encourage export and import restrictions, but this impact is quite limited under current conditions. The main reason is that most exports are crude products (crude oil, seafood, rice, coffee, etc.). Production of

these products is highly dependent on natural conditions (resource reserves, land, weather conditions, etc.), global supply will decrease if prices increase, especially in the short term. While products of the processing industry are often considered to be more sensitive to relative price fluctuations, some products with good turnover, such as clothing and footwear, are highly dependent on imported raw material resources, so the devaluation of the *dong* has fewer advantages.

The majority of imports are machinery, equipment, raw materials and spare parts that domestic production cannot satisfy and are therefore less sensitive to exchange rate fluctuations.

The fact that inflation is often accompanied by a policy of devaluation due to the rise in the prices of imported machinery, equipment, raw materials, fuels, materials and other intermediate products, the improvement in the international competitiveness of Vietnamese products will be partially limited by the effect of the devaluation.

Psychologically, the devaluation of the *dong* will negatively affect citizens' confidence in Vietnam's currency and monetary policy. An unstable policy makes it difficult for domestic investors to provide capital to start businesses instead of speculating on real estate, holding gold or US dollars. On the other hand, at present, in Vietnam's real situation, individuals are allowed to hold foreign currency or can deposit money directly in foreign currency. If the exchange rate is too high, psychological pressure will result. Households have significantly modified their savings structure to be interested in strong foreign currencies, which has led to an artificial increase in demand for foreign currencies and a depreciation of the national currency greater than that targeted by the monetary authorities. Public confidence in the national currency will therefore be compromised, as its means of payment and the preservation of its value may be eroded and the achievement of macroeconomic stability threatened.

Finally, currency devaluation will lead to economic losses for business operations related to foreign currency borrowing, which means that the foreign currency debts of the national currency will automatically increase. Government and companies that have borrowed in foreign currencies will have to spend a large portion of their income to repay their foreign currency debts, making their financial situation more stressful.

The above analysis shows that Vietnam should not devalue the national currency significantly. However, it can currently slightly reduce the value of the *dong* to strengthen the international competitiveness of its products, which is low both on the international and domestic markets.

3.4.5.2. Improving monetary policy

Flexible management and coordinated coordination of monetary policy tools, combined with macroeconomic objectives, have an impact on monetary policy instruments, the interest rate and credit structure. In addition, the BEV strictly controls changes in money supply and monetary regime through monetary policy instruments such as:

- Indirect tools (open-market operations, discount, currency swaps) will be the main tools of operational monetary policy. Their purpose is to improve the efficiency of the use of open market operations to regulate the available capital of credit institutions. Interest rates on open market transactions must be correlated with other interest rates regulated by the BEV.
- Interest rate tool: it is established in accordance with international regulations. When using interest rate tools, market factors require particular attention. The BEV must monitor and analyse the evolution of interest rates on national and international financial markets, thus actively adjusting the base interest rate to broadcasting signals according to market interest rates. The BEV may use the refinancing rate and the rediscount interest rate as the key rate. The refinancing interest rate was gradually increased to reach the ceiling, while the discount rate was kept at a low level in order to create a short-term capital supply channel for commercial banks. The interest rate policy must create favourable conditions for credit institutions to raise capital and encourage the development of investment in production.

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Monetary perspectives for EU grown from Finance Philosophy

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Abstract: *The fast speed global economies evolving require different approach to be handled in terms of analysis and perception. Here comes a new discipline – Finance Philosophy – an intersection between the conventional finance theories on one hand and philosophy on the other. In this cross-sectional environment, an analysis will be made so as to bring new notion in the monetary perspectives for European Union.*

Philosophy will bring fresh air in conventional understanding how the monetary policy and money as an institution behave together and is there another angle we can look into the current monetary state of EU. We will search for new interpretation of traditional monetary and philosophy concepts in the current European context.

Key words: *Behavior finance, Monetary theories, Philosophy of Finance, History of economic thought*

JEL Code: *G40, E42, E52*

I. Introduction:

Living in an infinite high-speed environment, having seen all types of cycles, lines, anomalies, crises (even at times forgotten and re-occurring events) in financial context, transferring our knowledge from traditional theoretical finance through Behavior one, filling up the unknowns, the question “what’s next” is waiting for an answer. The reason is that we still do not have all finance questions settled up in full scope even we can have all the information at one click sometimes not in the right time and place defined by the cost of having certain type of it.

Here comes a new “mystic beast” called Finance philosophy. A “New” discipline that is trying to ask all possible questions for the answers we already have.

It may seem naive but after the giant noise of behavioral finance, filling up the lack of explanation of certain finance theory phenomena, it seems that there can be added one more irrational view – the one of Philosophy.

The new subject of Finance philosophy is aiming to be the intersection between financial ethics, financial economics, history of economic thought, philosophy of economics, anthropology, sociology of finance, behavior economics and traditional corporate finance.

The way we perceive information nowadays requires new attitude through analysis and interpretation of finance concepts. This is why here comes the new discipline – to add some more irrational perspectives from ancient times around how we explain processes and search for decisions/ opportunities.

Current article will try to analyze the present status, features and perspectives of EU monetary policy through the eyes of Financial Philosophy. Monetary theories will be reviewed along with their application and implications in the nowadays condition of EU monetary environment.

II. Exposition

A good start can be defined with a question: Why we need philosophical view in money/ monetary analysis?

We can define several accent points:

- Try to broaden the dimensions we think about monetary policy along with possible concrete solutions for the current difficulties experienced in the Euro Zone
- Ask questions for theory of money that rested unanswered from the conventional financial science
 - Conceive money as a product of market and instrument for future development
 - Research money as a mean for regulation of social relationships
 - Defining limits of freedom and people equality in society through the money institution (for example socialism/ capitalism)
 - Reviewing monetary theories into a present Eurozone context

In summary, the most important monetary finance philosophy question is to be “Money or man should be the measure for everything”?

Getting through the exercise of researching based on the aims outlined above, we will try to define what is money in philosophical- financial environment.

First of all, it is stated to be a way of society organization, meaning it is setting up a relationship between people mainly through the credit institution. The re-distribution of capital is the basis on which the financial system exists.

Secondly, it is considered to be an evolution of the market, jumping outside of the simple exchange of goods and services. Thus, it can be derived the thesis that money is a measure of reality – if something cannot be translated into money units, then it isn't real. We as individuals are transferring this reality based on our preferences and incentives.

Moving further, money is a tool for development of an individual and his attitude towards labor. This point is being defended by the compensation against labor and its motivational meaning. Labor is the ingredient for building up a social system

Passing by the above-mentioned attitude, money is defining a social order in terms of value orientation and moral standards. So, we can say in this sense that the value of money is not being issued from its material form but from its influence in the social interaction, being the best mediator.

Getting in depth with the philosophical characteristics – money evolve in two interconnected actions – acquisition and alienation. Acquisition of goods and alienation of means setting in this sense a social order. As a means of exchange, on the other hand, money is a measure of value, so a measure of reality as already noted.

Being human- oriented, the philosophical concept is considered as an exchange between individuals to create social connections of dependence in economy. We will review this point under the Ontology concept. This branch looks at the nature of things, their being, cause and identity.

Social Ontology of money – the nature of being

How the social construction of money works?

We will use the logic of a ladder, outlining the following steps from the money “production” process:

1. The social phenomenon – “money” is defined by the collective belief
2. From this belief, someone declares officially a thing is “money”
3. Someone else accepts the declaration, transforming the declaration in a social rule
4. Being a social rule, “money” is transferred to the subjective human attitude
5. “Money” is accepted and multiplied by individual consciousness

Key figure describing this phenomenon, is George Simmel (“Philosophy of money”)¹ who analyzes money as an institution that defines our time because it allows valuation of things and facilitation of transactions. However, he criticizes the money for replacing other forms of asset valuation so an absolutism cannot be applied.

¹ Simmel, George, Philosophy of Money, Psychology Press, 2004

Here we can make the conclusion that the being of money is defined by the collective belief, declaration and accept. This is defining the ontological nature of the money existing.

What is happening in our reality, European environment?

Moving forwards, how we can reconnect all these theories and perceptions with what is happening nowadays in Europe and the Eurozone – its monetary scene?

Maybe a brief outline of the points defining the current monetary factors at the Eurozone is needed as a starting point:

- ***Fall of industrial production values*** - Industrial production declined 1.7 percent from a year earlier in September 2019, following a 2.8 percent fall in the previous month and compared to market expectations of 2.3 percent drop. This was the 11th consecutive month of contraction in the industry sector.²
- ***Weakened business investments*** – Economies are trying to go ahead with the business investments but the growth is still an expected miracle. Even the share of government investment decreases relative to government consumption, meaning that the structure of government spending moved on average towards consumption and away from investment³ (see also EIB, 2017).
- ***Less than expected growth*** - The Eurozone quarterly economic growth was 0.2 percent in the third quarter of 2019, the same as in the previous three-month period. GDP Growth Rate in the Euro Area averaged 0.39 percent from 1995 until 2019, reaching an all-time high of 1.30 percent in the second quarter of 1997 and a record low of -3.20 percent in the first quarter of 2009
- ***Geopolitical uncertainty*** – the threat of stronger protectionism measures is coming as fears of losing certain markets
- ***Vulnerabilities in emerging markets*** with side effects on the developed European markets depending on trade exposure
- ***Global financial markets volatility*** – the increasing uncertainty brought by multiple factors

² Eurostat data

³ Occasional Paper Series WGEM Team on Investment - Business investment in EU countries, No 215 / October 2018

- **Level of unemployment** - seasonally-adjusted unemployment rate was 7.5 % in October 2019, down from 7.6 % in September 2019 and from 8.0 % in October 2018

And what about the Euro as a currency?

Settled by the Union to be a powerful tool of integration, the Euro is experiencing hard times in terms of keeping the balance between the competition and integration aims.

The very existence of the Euro zone is questioned nowadays so it should be constantly defended and promoted as a strategy and a way through achieving the monetary union and convergence of the Zone economies.

How an individual can cope with this environment? Not only behavioral approaches are needed, but also philosophical eyes and interdisciplinary perspective.

Broadly speaking, the life of the individual through money can be defined by making a choice based on the individual freedom and personal value – based motivation.

Two main features of this individual choice can be outlined:

- **Quality distinctness**- limitations- that is to mean “the order in the market chaos”, the playground we are supposed to explore, limited by the market powers and the money tool to cope with these powers
- **Quantitative infinity** - the chaos born from individual’s motives, the personal preferences, incentives, beliefs, played on the above – mentioned market playground

As a result, combining these two complementary features, we have reached the development of social intellect, controlling the free will of market. This is how through our perspective money lives in individuals.

Now we will go through several monetary theories and look for the possible implications at the Euro Zone monetary environment. The approach to be followed is: step 1: outlining the features of traditional monetary theory; step 2: analysis how it can be interpreted in the current European monetary environment.

Commodity theory of money and Aristotle

The theory is defined by Aristotle (Politics, 1255–1256 B.C⁴). Money is considered as commodity, serving as means of exchange, unit of account and means of storing value.

The exchange relationship helped by money is described by Aristotle as a "reciprocal justice", expressed under the form of proportion. That is to mean the value we get is proportionate to the value we pay as money, being in exchange.

This theory defines the need of social and cultural system to exist in recognition by its members so as for the first part of the relationship to have the same added value as the second part.

What is the interpretation of the theory in Euro environment?

The idea of "*reciprocal justice*" is very close to the main message of the targeted convergence of the Euro area. We have different countries with their macroeconomic/ monetary cases and they are working for the rapprochement of their policies, measures and strategies so as to bring an improved macroeconomic ground, driven by similar priorities and contributing to the overall welfare. If we look in the term reciprocity – the members of the union are stating their strong features (indirectly), which are accompanied by the ones of the other countries, creating an increased, ameliorated value by combining the comparative advantages.

On the other hand, the “storing” powers of the Euro are under thread today as its value is shrinking up. It has drifted toward its lowest levels in the last months of 2019 against the dollar as Europe is absorbing the negatives of the global growth slowdown. Economic agents ask themselves if it can become worse, thinking about their investments and plans to store value.

⁴ Aristotle. Aristotle's Politics. Oxford :Clarendon Press, 1905

Credit theory

This theory views money as an expression of credit relationships between people. The well-known definition from traditional finance studies –markets exist with the aim of re-distribution of funds- those who dispose with a surplus are providing on those with deficit through the credit institution. So individual economic agents are in exchange of their funds, searching for a profit, maximization of their value.

On the other hand, we have the state as a credit provider. Being the most trusted creditor, it is setting up the rules and expectations for individual economic agents, taking advantages from its resources. With this, there stays the risk of resources flooding through creation of money and issuing bonds- driving an impact on debt levels, inflation, financial instability and triggering economic crises.

What is the interpretation of the theory in Euro environment?

The credit theory will be outlined by summarizing the credit climate in the Eurozone. In 2018, loans to EU households and non-financial corporations (NFC) increased by 2.7%, the second consecutive year of the expansion.

- For the fourth year in a row, total loans in New Member States (NMS) grew faster than in old Member States (EU-15). This fact has to deal with the expectations of economic agents from the NMS
- Compared to the previous year, the total loans growth rate in 2018 accelerated from 2.2% to 2.7% in EU-15, while it slowed from 5.9% to 3.5% in NMS.⁵
- Credit standards eased slightly for loans to enterprises

According to the “Euro area bank lending survey” for the third quarter of 2019:

- Credit standards (i.e. banks’ internal guidelines or loan approval criteria) for loans to enterprises eased slightly in the third quarter of 2019. Across the different firm sizes, credit

⁵ Lending to European Households and Non-Financial Corporations: Growth and Trends. Key findings from the ECRI Statistical Package 2019 Roberto Musmeci, October 2019

standards slightly eased for loans to small and medium-sized enterprises (-2%) and remained broadly unchanged for loans to large firms (-1%).⁶

- Net demand for loans to enterprises remained broadly unchanged in the third quarter of 2019, in spite of expectations of an increase in the previous round. Demand slightly increased for loans to SMEs, but decreased for loans to large firms
- The impact of the ECB's asset purchase program was reported by a survey and was stated by the banks to have contributed over the past six months to an improvement of their liquidity position and their market financing conditions, but to a deterioration of their profitability so an opinion mix was submitted.

Chartalism

This theory was introduced by the German economist Georg Knapp in 20th century. It states that the value of money comes from it being issued by the government (state), not spontaneously (i.e. as an expression of exchange). So do we need an exclusive institution to state something as money and this money to have its own value? Moving further in the institutional flow, we can elaborate on the question of the need of an authority (governmental one) to bring the social agreement over value and a commodity to be stated as such.

Here we can think about the problematic: Is money creating institutions or institutions create money?

What is the interpretation of the theory in Euro environment?

The Euro is already 21 years old, life given from Economic and Monetary Union (EMU), aiming to be a powerful tool of integration. However, its nature is both institutionally and personally (local governmentally) questioned.

The main institution defending European monetary policy is European Central Bank (ECB). The ECB and the national central banks of all EU Member States constitute the European System of Central Banks. The primary objective of the European System of Central Banks is to maintain

⁶ The euro area bank lending survey – Third quarter of 2019 – European Central Bank

price stability. In addition, ECB is executing the banking supervision of credit institutions in the Euro Zone.

We can halve the institutional control in two parts – national and supranational. At national level we have reforms to promote sustainable economic convergence, increase of the growth potential for the local economies.

At Union level, the aim is competitiveness fed up by budget instruments. Structural reforms are to be started so as for the economies to be stabilized. The main point is the macroeconomic support and prevention of recession.

Going back to the finance philosophy question here- is money creating institutions or institutions creating money? Is the ECB creating money or it is guarantying its value and promoting a monetary stability? We can say that Euro is partially deriving its value and common use from the ECB acknowledgement and supervision. The other part can be defined from the social ontology of money we have reviewed above. It is defined from the collective belief and social consensus.

One further angle will be reviewed so as better and more complete picture of the European monetary policy to be drawn up - **ethical perspectives of money**.

A sub-division of the Philosophy science is Ethics. A brief review of money ethical perspectives will be done below with some questions ahead brought up.

From ancient times money is condemned as the Root of Evil, starting from Christian literature. However, in moral perspective, we can outline the following emphasis points:

- Money brings both stability and instability so it cannot be “labeled” as good or bad phenomenon
- It is capable of creating and destroying, uniting and separating societies, policies, economies, so we can conclude its duality and dependency in terms of subjects using it and objects being affected

- Freedom or dependency? Again, we are led by the duality and the nature of the included subject and object
- Man makes money and money makes man - shapes his lifestyle and thought. This is the last question we can outline as a major one for the finance philosophy. And it will remain open, because the subject of this unusual philosophy is where we search for questions on all answers we already have

To conclude the exposition let's try to be in the extreme point, asking:

What if _there isn't money?

We have discussed cases where money is defined by different theories, beliefs and environment. But let's set up another extreme finance philosophy hypothesis: What if there isn't money – are we to lose our social order, relationships, and value – based social systems?

We will try to destroy the well-established environment of money- determined world and imagine the “what if” universe.

How can we replace the money connection?

Barter– the first form of exchange between individuals. We can look further getting into the future society where natural resources are scarce, money does not exist because we cannot buy anything from the limited resources, so we are trying to exchange what we possess as comparative advantages. However, an exchange would only happen when we have double coincidence of wants. But is it frequent? Quite not, as not only the specific good should be the matter of coincidence but also its quality, quantity and individual characteristics.

In a certain moment, individuals will get into dissatisfaction of the barter deals, realizing that they can trade more easily if they have intermediate good:

- Easy to store and transport
- Easy to measure, split and facilitate billing between merchants
- Hard to destroy as to stay in time

- Being a mediator between the exact quality, quantity and individual characteristics of the desired good and their consumer preferences and satisfaction.

Is the society going to be deprived of its sense of greed, competitiveness, ego when not having money?

The social services that we get – police, health care, social activities, military will extinct as the individuals there will not have an incentive to work there, for free. The labor in a sense we know it nowadays will extinct as the main reward we have – salary will no longer exist in its current form. The world will be in a dark, unordered chaos. We can move back to our 17th century society form. The streets will not be any safer and local defense rules will apply.

But maybe this new social order will be a way to re-structure our society? Without money we can learn how to live with less. We can shrink the gap between poor and rich as the definition of these two groups will be outdated. However, a better world shouldn't be a part of a “what if” scenario. We will learn to cooperate, with the encouragement to innovate and work on our comparative advantages, based on objective skills and knowledge.

For now, this scenario is to rest in a scientific article...

III. Conclusion

This article has tried to review the traditional monetary theories, current European Monetary Climate and philosophy questions in one. We believe that the interdisciplinary manner of treating a topic is the key for broadening the understanding and knowledge about certain problem.

The discipline of Finance Philosophy is targeting this– combining the concepts from rational and irrational sciences and deriving a critical view in a search for over the traditional counter ideas.

We have seen that current European problems can be analyzed through the philosophical, ontological and ethical perspectives, thinking about the monetary policy as a living organism and a subject of duality and limitless questions.

Thus, the contribution of the article is aimed to be not only in the tools used to explain the Euro climate, but also the fresh air brought into the ancient monetary theories and their interpretation.

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Application of cost-volume-profit analysis for commodity operations management

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Abstract: *The principal aim of this paper is to make a short survey of Cost-Volume-Profit (CVP) analysis as a technique that usually examines variations in gross profit under different scenarios for changes in sales volume, cost, sales prices, and more. This approach has become popular in theory and practice and is called the critical point method. Accountants often perform CVP analysis to plan future levels of operating activity and to obtain information about:*

- ✓ *the amount of sales needed to reach a target profit level;*
- ✓ *the breakeven point, i.e. the amount of revenue needed to cover cost;*
- ✓ *whether a future increase in fixed costs will be effective or not;*
- ✓ *what are the stock to which priority should be given;*
- ✓ *whether the planned fixed costs expose the company to an unacceptably high level of risk or not, etc.*

Marginal income represents the difference between total revenue and total variable costs. Similarly, the marginal income per unit is the sales price per unit minus the variable price per unit. Both the contribution margin and the unit contribution margin are valuable instruments taking into account the effect of volume on profits. The contribution margin per unit shows how much revenue from each unit sold can be applied to the fixed costs. Once sufficient units are sold to cover all fixed costs, then the contribution margin per unit of all next sales becomes profit.

The paper also presents the results of the analysis "cost-volume-profit" for companies from Pazardjik region.

CVP analysis is a powerful tool in making managerial decisions including marketing, sales, investment and financial decisions.

Key words: *analysis, cost analysis, sales volume analysis, profit analysis, CVP*

JEL codes: *M41*

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The term "analysis" is ancient Greek and means dismemberment, division of the whole. The analysis examines in detail the nature of the action or phenomenon.

It examines the complexity of the structure, the relationship of the elements of the object of study. Financial accounting is a process of selection, comparison and evaluation of accounting information in order to establish the relationships and trends in the enterprise that are required to make management decisions.

Cost-volume-profit (CVP) analysis is a technique that usually examines changes in gross profit under different scenarios of changes in sales volume, cost, sales prices etc. This approach has become famous in theory and practice and is called the critical point method. Accountants often perform CVP analysis to plan future levels of operating activity and to obtain information about:

- the amount of sales needed to reach a target profit level;
- breakeven point is the amount of revenue needed to cover losses;
- a future increase in fixed costs effective;
- which products or services should be prioritized;
- whether the planned fixed costs expose the company to an unacceptably high level of risk, etc.

Marginal income represents the difference between total revenue and total variable costs. Similarly, marginal unit income is the unit selling price minus the variable unit price.

Both the contribution margin and the contribution margin per unit are valuable tools in accounting for the effect of volume on profit. The unit contribution margin shows us how much revenue from each sold unit can be applied to fixed costs. Once enough units have been sold to cover all fixed costs, then the contribution margin per unit of all other sales is profitable.

The next part of this section presents the results of a cost-volume-profit analysis for company A in the Pazardzhik region, which is engaged in the production and sales of a Middle tower computer case.

Table 1 presents real data on the average selling price of a good, the minimum and maximum of cash sales over the last 5 years, the variable and fixed costs per item. In the last two rows of the table the critical point of the company in terms of cash sales and the critical point in terms of minimum sales value in BGN is calculated.

Table 1 Sales, fixed and variable cost per item for Company A

Unit selling price	BGN	54,90
Units sold:	BGN	1250,00
Minimum	pcs	200
Maximum	pcs	2600
Variable costs	BGN	5,25
For unit materials	BGN	1,10
For labor per unit	BGN	4,10
For electricity per unit	BGN	0,05
Fixed costs	BGN	19 300,00
rentals	BGN	4 500,00
Depreciation	BGN	10 000,00

Insurance	BGN	1 200,00
fin. expenses (interest, etc.)	BGN	3 600,00
Critical point (number of units)	pcs	388,72
Critical point (in value)	BGN	21 340,79

The critical point of sales of units for Company A is calculated as follows:

$$BEP = \frac{FC}{P - VC} = \frac{19300}{54,90 - 5,25} = 388,72 \approx 389 \text{ pcs.}$$

A critical selling point in value can be calculated in two ways. The first way is by multiplying BEP in units of market price, i.e.:

$$388,72 \text{ pcs.} * 54,90 = 21\,340,79 \text{ BGN.}$$

The other way is to collect the total amount of fixed costs and the total amount of variable costs for 389 pcs. (table 2) i.e.

$$19\,300,00 + 2\,040,79 = 21\,340,79 \text{ BGN}$$

Table 2 illustrates the calculated total fixed and variable costs for Company A for sales equal to the critical point. Total material, labour and electricity cost levels are also calculated, multiplying critical point cash sales by the respective unit cost variables.

Table 2 Analysis of Company Total Variable and Fixed Costs in a scenario of critical point

Sale price	54,90 BGN
Critical point in cash	388,72 pcs.
Total revenue	21 340,79 BGN
Total variable costs	2 040,79 BGN
for materials	427,59 BGN
for work	1 593,76 BGN.
for electricity	19,44 BGN
Total fixed costs	19 300,00 BGN
Total costs	21 340,79 BGN.
Gross profit	0,00 BGN.

Operating leverage measures the operational risk of a business that is generated by too high a fixed cost. It gives an idea of how risky (varying) an entity's operating income (EBIT) is and shows the effect of a change in sales on an entity's revenue.

It is calculated by the following formula:

$$OL = \frac{\% \text{ change in EBIT}}{\text{change in sales}} = \frac{(P - V) * X}{(P - V) * X - FC}$$

If we use the data in Table 1, then the operating leverage for the company is:

$$L = \frac{(54,9 - 5,25) * 1250}{(54,9 - 5,25) * 1250 - 19300} = 1,45$$

This means that if sales change by 1%, then gross revenue (EBIT) will fluctuate to 1.45%.

Financial leverage measures the financial risk an entity incurs. It is associated with fixed payments (on loans, leasing contracts, etc.) in order to increase the return on the enterprise. The higher the financial leverage, the higher the financial risk incurred and the higher the cost of capital.

Financial leverage can be calculated using the following formula:

$$FL = \frac{\% \text{ change in EPS}}{\text{change in EBIT}} = \frac{(P - V) * X - FC}{(P - V) * X - FC - IC}$$

where: EPS is a profit share;

IC - interest expense or dividend expense for preferred stock;

$$FL = \frac{(54,9 - 5,25) * 1250 - 19300}{(54,9 - 5,25) * 1250 - 19300 - 3600}$$

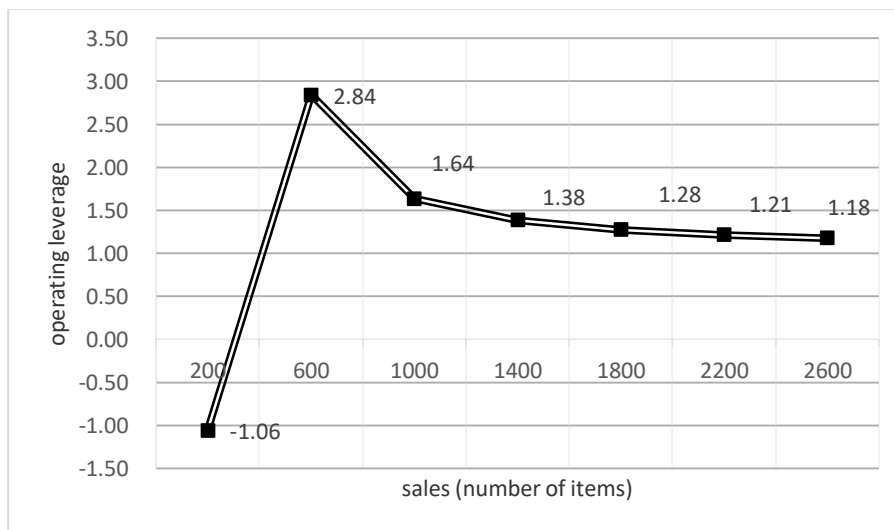
The specific value means that if gross income (EBIT) changes by 1%, then EPS will fluctuate within 1.58%. Table 3 shows the results of the analysis of the sensitivity of operating leverage to sales.

Table 3 Estimated values of the operating leverage of Company A under different sales scenarios

Sales	Operational leverage
200	-1,05977
600	2,83985
1000	1,63591
1400	1,38439
1800	1,27544
2200	1,21461
2600	1,17579

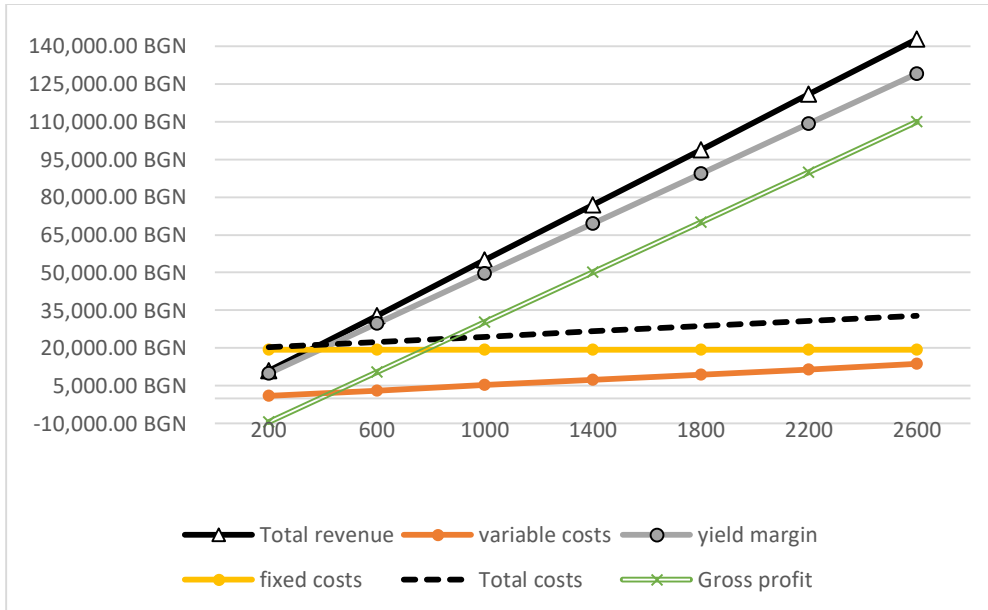
Graph 1 shows the relationship between the change in sales of Company A and the values of operating leverage.

Graph 1 Investigation of the operating leverage of the enterprise under different scenarios of cash sales



Graph 2 is known as cost-to-profit or CVP chart and shows visually the relationship between the change in total revenue and total cost. It is most often used to illustrate the expected profit changes in different business activity scenarios.

Graph 2 CVP diagram



Graph 2 is generated based on the calculated data in Table 4. The intersection of the line of total revenue with that of total cost indicates the critical point of the firm. For Company A it is at 388.72 PC boxes sold and is between 200 and 600 for the abscissa. With respect to the ordinate axis of the chart in value, the critical point of sales was calculated in Table 1 at BGN 21 340,79 (i.e. between BGN 20 000 and BGN 35 000).

Table 4 shows the calculated values of the performed sensitivity analysis. The purpose of this type of analysis is to investigate the change in variable costs, marginal income, fixed costs and gross profit of Company A under different sales scenarios.

Table 4 Investigation of the impact of sales on variable costs, marginal revenue, fixed costs and gross profit of Company A

Sales	200	600	1000	1400	1800	2200	2600
Total revenue	10 980,00	32 940,00	54 900,00	76 860,00	98 820,00	120 780,00	142 740,00
Variable costs	1 050,00	3 150,00	5 250,00	7 350,00	9 450,00	11 550,00	13 650,00
For unit materials	220,00	660,00	1 100,00	1 540,00	1 980,00	2 420,00	2 860,00
For labor per unit	820,00	2 460,00	4 100,00	5 740,00	7 380,00	9 020,00	10 660,00
For electricity per unit	10,00	30,00	50,00	70,00	90,00	110,00	130,00
Marginal income	9 930,00	29 790,00	49 650,00	69 510,00	89 370,00	109 230,00	129 090,00
Fixed costs	19 300,00	19 300,00	19 300,00	19 300,00	19 300,00	19 300,00	19 300,00
Total costs	20 350,00	22 450,00	24 550,00	26 650,00	28 750,00	30 850,00	32 950,00
Gross profit / loss	- 9 370,00	10 490,00	30 350,00	50 210,00.	70 070,00	89 930,00	109 790,00

In the second part of point 3 the results of the analysis of enterprise B will be presented. It realizes its turnover by trading with three canned vegetables. In the calculations below, they are indicated in the tables as Commodity A, B and C. Table 5 presents the sales for the last year, market prices and variable costs per unit of the company.

Table 5 Sales and variable costs per unit of enterprise B

Stockes	stock A	stock B	stock C
Units sold (number)	20170	14125	16460
Market price per unit	0,80	1,20	2,90
Variable cost per unit	0,52	0,90	1,95

When using the cost-volume-profit analysis of businesses that generate their revenue from the sale of a significant number of items and services, the sales mix approach is often used. It represents proportionally the enterprise's sales. It can be calculated both in terms of cash sales and sales revenues in BGN, with different values.

In the cost-volume-profit analysis, it is assumed that the sales mix is a constant value. Assuming that the sales mix remains unchanged, CVP analysis is allowed to represent sales (in cash or in levs) as a combined aggregate value for the enterprise as a whole.

Table 6 Analysis of marginal revenue enterprise B by item

	stock A	stock B	stock C	total
Units sold	20170	14125	16460	50755
Income BGN	16 136,00	16 950,00	47 734,00	80 820,00
Variable costs BGN	10 488,40	12 712,50	32 097,00	55 297,90
Marginal income BGN	5 647,60	4 237,50	15 637,00	25 522,10
Marginal income per unit BGN	0,28	0,30	0,95	0,50
The marginal income ratio	35,00%	25,00%	32,76%	31,58%
Sales mix (pieces)	39,74%	27,83%	32,43%	100,00%
Sales mix (earnings)	19,97%	20,97%	59,06%	100,00%

Table 6 presents the results of the calculations made with respect to the analysis of marginal revenue for enterprise B. Marginal income is a concept closely related to cost accounting and its purpose is to calculate the profitability of individual items in the enterprise sales mix.

The marginal revenue can be calculated both per item and for sales across the entire product line. In the first case, it is obtained by subtracting the variable cost per unit from the selling price of the product concerned with respect to the entire product line, as the total sales costs are deducted from the sales of an item. For example, for the entire product line of Product A, marginal income is estimated at BGN 5 657.60 (BGN 16 136.00 - BGN 10 488.40) and marginal income per unit is BGN 0,28 (0,80 – 0,52).

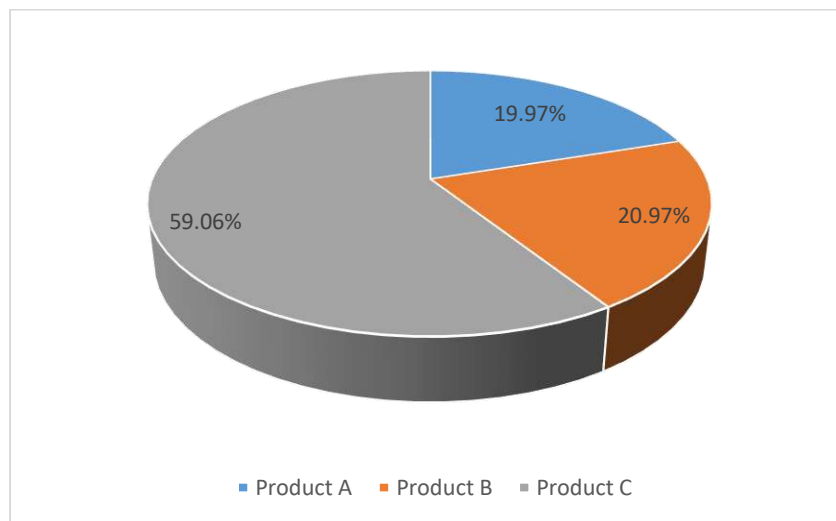
The marginal revenue ratio is calculated based on the unit and total sales metrics calculated. The marginal income ratio is obtained by dividing the marginal income in BGN for a given product by the sales made in BGN by the respective item. For example,

for product A it is equal to 35% (marginal income of BGN 5 647,60 realized income from sales of goods A 16 136,00 BGN).

A negative or low value of the profit margin is associated with a product line or business segment that is not profitable or low profitable.

Graph 3 shows the sales mix in terms of revenue.

Graph 3 Sales mix of revenue



The sales mix for the last year shows that the received revenue from sales of goods A is 19.97% of the total, those of goods B is 20.97% and the biggest contribution is made by goods with 59.06%.

Graph 4 illustrates the sales mix in terms of sales of items. As you can see here the percentages are different and this means that the sales structure in value is different from that in kind. In terms of cash sales, commodity A is accounted for the largest share of 39.74%, followed by commodity C by 32.43% and lastly commodity B.

Graph 4 Sales mix of revenue

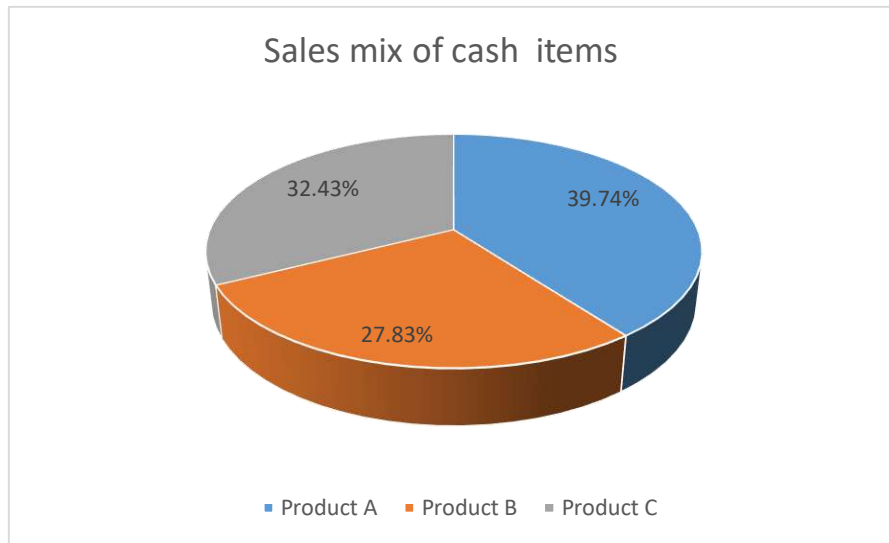


Table 7 shows the calculated main elements of the statement of income and expenses of enterprise B. The table shows that the net profit of the company for the last year is BGN 21 844,89.

Table 7 Calculation of the net profit of enterprise B

Marginal income	BGN	25 522,10
Fixed costs	BGN	1 250,00
Taxable income	BGN	24 272,10
Tax profit	BGN	2 427,21
Net profit	BGN	21 844,89

Table 8 shows the results of a cost-volume-profit analysis in a sales scenario equal to the critical point. As can be seen from the table, while maintaining the proportions of the sales mix unchanged, if company B wants to be able to cover its costs, it needs to make a minimum of sales in respect to product A of 988, of goods B 692 pcs. and from product C 806 pcs. or total sales amounted to 2 486 items. Accordingly, in this situation, the enterprise would generate total revenues of BGN 3 958,33, which cover exactly the total variable costs (BGN 2 708,33) and the total fixed costs (BGN 1 250.00).

Table 8 CVP analysis of enterprise B in a critical point scenario

	Product A	Product B	Product C	Total
Sales(units)	988	692	806	2486
Income BGN	790,30	830,16	2 337,88	3 958,33
Variable costs BGN	513,69	622,62	1 572,02	2 708,33
Marginal income BGN	276,60	207,54	765,86	1 250,00

In the last part of point 3, a cost-volume-profit analysis will be made in the scenario of maintaining the same product mix and a target net profit of BGN 50,000 per enterprise B. If the company wants to earn exactly BGN 50,000 next year, then at 10% corporate tax the gross and profit will be BGN 55 555,56 and accordingly the fixed costs + target profit will be BGN 56 805,36.

Table 9 CVP analysis of Company B in the scenario of a target net profit of BGN 50,000.

	Product A	Product B	Product C	Total
Sales in units	44893	31439	36636	112967
Income BGN	35 914,54	37 726,29	106 243,47	179 884,30
Variable costs BGN	23 344,45	28 294,72	71 439,57	123 078,74
Marginal income BGN	12 570,09	9 431,57	34 803,89	56 805,56
Fixed costs BGN				1 250,00
Taxable income BGN				55 555,56
Tax 10%				5 555,56
Net income BGN				50 000,00

Table 9 shows that if a company is aiming for a net profit of BGN 50,000, it is necessary to make total sales of 112,967 items in cash or if the existing sales mix is

maintained, it means that 44893 units are sold. goods A, 31439 pcs. goods B and 36 636 pcs. goods C.

The calculation of sales (in cash) for a target net profit of BGN 50,000 is made by the following formula:

$$Q = \frac{FC + 55555,56}{P - VC} = \frac{56\ 805,36}{0,50} = 112967 \text{ pcs.}$$

Specific item sales in pieces were found as the percentage of the item sales mix for a specific item (calculated in Table 6) multiplied by 112 967 items. For example, the required sales for commodity A are set at 44 893 pcs. (39,74% * 112 967).

The disadvantages of applying the cost-volume-profit analysis can be summarized in the following areas:

- the projected revenue and expenditure projections can deviate significantly from the real ones;
- CVP analysis does not calculate fluctuations in revenues or costs that could be caused by trade discounts on large deliveries, changes in production, changes in productivity, efficiency, special discounts for customers, etc.;
- CVP analysis suggests that the sales mix will remain unchanged in the future, which is not true;
- CVP analysis assumes that selling prices and variable costs will not change;
- Does not account for political, regulatory, operational, credit, liquidity risks, etc.

Conclusion

In summary, the Cost-to-Profit (CVP) analysis, which typically examines changes in gross profit under different scenarios of changes in sales volume, cost, sales prices, etc. It was made on the basis of real data of operating companies and it is necessary to conclude that it cannot account for small fluctuations in income and expenses, as well as political, regulatory, operational, credit, liquidity and other risks.

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EU convergence and competitiveness: in search of modern industrial policy

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Abstract: *Global economic environment is changing dynamically due to a number of technological and political processes. While the European industries lose momentum in global competition, the internal EU problems remain unsolved and the idea of shared prosperity and growth clashes with the reality of multi-speed Europe and sluggish growth.*

After being denounced as obsolete and ineffective in the last couple of decades, in terms of changing post-crisis global landscape the idea of European industrial policy is revived. The newly established industrial policy paradigm at EU level after 2009 is examined in the context of the decreased investment activity; the structure of intra- and extra-EU trade; the political concept of EU construction and the core principles of integration. Economic divergence in the EU is identified as a challenge to be overcome by strategic industrial policies designed in the context of multi-speed Europe where non-convergence is recognized, and a joint growth strategy outward is elaborated. The paper discusses the possibility for building strategic industrial policy at EU level considering the economic reality in the Community. Global context is also considered. Recommendations for a modern industrial policy designed to restore economic growth and technological competitiveness are drawn up.

Key words: industrial policy, convergence, technological leadership

JEL codes: F02, O14, O25

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1. Introduction

In the last couple of decades, the European union faces new economic reality posing challenges for its development. On the one hand, the enlargement process has proved to be problematic as the EU is now comprised of many too divergent countries. The size of the Union makes the decision-making process difficult and policy measures are often a compromise between the interests of member states resulting in inefficiency and doubtful long-term effects. On the other hand, global environment has changed dramatically. The EU competitive positions deteriorate, and European technological leadership is put to the test by the aggressive and growing competitive pressure by the US, China and East Asian countries.

World economic environment is changing dynamically due to a number of technological and political processes: the unfolding of Industry 4.0, the role of Asia in global economic and technological development; the shift of power towards the developing world; the rise of protectionism in global trade; the Chinese dominance in manufacturing and its aggressive moves towards technological leadership. The EU economy faces new economic reality and its positions in global competition worsen. While the European industries lose momentum in global competition, the internal EU problems remain unsolved and the idea of shared prosperity and growth clashes with the reality of multi-speed Europe and sluggish growth.

After being denounced as obsolete and ineffective in the last couple of decades, the concept of targeted industrial policy is again discussed in policy and academic circles. Industrial policy and its components are considered tools for catching-up in the developing world, but also as a strategy for a new growth path for the developed world. In terms of changing post-crisis global landscape the idea of European industrial policy is revived. However, its practical implementation is a puzzle as it is based on an outdated approach not corresponding to the new global economic order and lacks effective targeted policies. The aim of this report is an outline and analysis of the main challenges in front of the EU industrial development considering the chronology of the EU industrial policy and its current features.

In the first part of the paper, the chronology of the EU industrial policy is analyzed, its principles and assumptions are critically discussed. The overview provides the foundation for identification of the main deficiencies of the industrial policy measures considering the internal structure of the EU and its functioning mechanisms, on the one side, and the external positions of European manufacturing and trade, on the other. The

newly established industrial policy paradigm at EU level after 2009 is analyzed in the context of the decreased investment activity; the structure of intra- and extra-EU trade; the political concept of EU construction and the core principles of integration. The conflict between competition policy and industrial policy measures is analyzed through the case of the Siemens-Alstom merger.

The paper discusses the possibility for building strategic industrial policy at EU level considering the economic reality in the Community. Global context is also considered. Recommendations for a modern industrial policy designed to restore economic growth and technological competitiveness are drawn up.

2. History of EU industrial policy – before and now

2.1 Industrial policy of the European Community

As Pelkmans (2006) puts it: “*Sectoral and specific industrial policy lies at the origin of the Community*”. The integration processes in Europe in the 50s of the last century started and developed in the context of predominant state intervention and support in industrial development and in international corporate performance. The sectoral integration in steel and coal production, as well as agriculture, was structured according to the mainstream economic thinking of that time. Wigger (2018, 2014) describes strong neo-mercantilist and protectionist outlook in the post-war decades of integration. During the 50s-80s period, series of measures are permitted and applied for stimulating performance of certain key industries, incl. direct and indirect state aid, financial support for specific, sectoral investments or R&D projects, tax reductions or procedures of guaranteed procurement. The advance in integration processes gradually changed the role of the European Commission in setting-up the industrial development agenda by fostering the supranational decisions. However, the interventionalist approach remains. The Community policies are oriented towards the establishment of European champions in global markets through transnational industrial cooperation and consolidation via mergers and acquisitions. The prioritization decision-making is based on assessment of the competitive positions of US counterparts, usually in high-technology sectors, such as machinery, aerospace, computing industry. Sectoral industrial policies and protection is designed also for the sectors which were considered “too big to fail” /steel, coal, electricity, railways, textiles, shipbuilding, infrastructure/ (Wigger & Buch-Hansen, 2014, p. 69).

The era of protectionist and interventionalist policy measures and integration processes ends with the prominence of the neoliberalist agenda in the 80s and the 90s.

The established industrial policy from the previous decades characterized by subsidization and protective assistance is denounced by Giersch (1985) as “Eurosclerosis” and it is considered a factor for accumulating structural deficiencies in the European Community. In the 1980s a fast transition to the so called “horizontal” industrial policy takes place and policy measures in industrial development get closer to the current scope of competition policy. The rhetoric of competitiveness remains significant. However, the focus and key messages change dramatically. In accordance with the newly established predominant economic agenda, the stimulation and encouragement of competitiveness and leadership is no longer considered as the outcome of protection and intervention, but rather the intense competition is propagated to enhance competitiveness. The foundations of the modern EU competition and antitrust legislation are laid. State aid is strictly controlled and, mostly, curtailed. Cartels and abuses with dominant positions are stringently prosecuted. The liberalization, pro-market impulse is further enforced by intensive privatization process. The essential principles at the core of EU single market and monetary union are based on the faith in free markets efficiency. This general shift in perceptions and attitude towards economic development and its determinants is best illustrated by the replacement of “fair competition” with “free competition” in the Maastricht Treaty (Wigger, 2018). The era of vertical industrial measures and strong state interventionist and protectionist role is over. This process is observed worldwide.

A quick overview of the main tools for sectoral industrial policymaking – sectoral interventions and sectoral policies; clustering and cooperation; trade policies¹ - makes it clear that the new EU framework does not provide opportunities for their application at national or community level. The Lisbon Strategy of 2000 is based on the same logic that more competition ensures enhanced competitiveness.

2.2. Latest trends in EU industrial policy

The global crisis and the subsequent Euro crisis put the EU to the test of more than a decade of stagnant growth and no clear vision on the growth path ahead for the Union. In this context, the traditional concept of industrial policy is again debated in academic and policy circles. Furthermore, the interest in reviving industrial policy tools seems enough for the initiation of tailored measures for re-industrialization and enhanced competitiveness. In 2010 the European Commission calls out for a “fresh approach”. The

¹ See Pelkmans (2004, p. 4)

need for new strategy is due to the loss of three million jobs in manufacturing since the start of the crisis. As the recovery of the Union is slow and insufficient, it becomes obvious that new, more pro-active and aggressive measures are required.

In 2010 the new Europe 2020 strategy is elaborated replacing the Lisbon strategy of the previous decade. It consists of 7 initiatives and several of them are directly related to the resurgence of EU industrial policy. However, the outlined approach and the envisioned measures are general and horizontal. The sectoral (or vertical) aspect is not included. The concept of “industrial policy” reemerges, however, the content of the policy recommendations is palliative and does not address the serious competitiveness and structural issues of the EU. The EC communication “Industrial Policy: Reinforcing competitiveness” adopted in 2011 has the same effect.

In 2012 the EC publishes the first industrial policy communication where a focus on strategic sectors is mentioned. In “A stronger European Industry for growth and economic recovery – Industrial policy communication update” are outlined six key areas, incl. clean vehicles, bio-based products, smart grids.

The first post-crisis steps in strategic reindustrialization of the EU are mostly too broad and don't envision serious actions to be undertaken at EU level. Some of the reasons may include lack of political will for redefining tools meeting the pre-set goal; as well as the still predominant, mainstream pro-market theory which is not consistent with more aggressive intervention. The former Competition Commissioner Almunia confirms this approach stating that the new EU industrial policy must be very different from the policies implemented in the 1970s. Almunia defines the existing EU competition legislation as “boosting growth; benefiting SMEs and ordinary consumers” (Almunia, 2014).

In 2013 the Commission launches a proposal for a “Convergence and Competitiveness Instrument” suggesting a procedure for recommendations to member states to regain competitiveness. This decentralized approach is further developed by the Council initiative for “Partnerships for Growth, Employment and Competitiveness” in 2013 envisioning partnerships between member states in the form of reform contracts with legally binding obligations for reforms. Later this idea evolves into a softer, less binding initiative for establishment of national competitiveness authorities which are to supervise reform policies and overall performance of the economies. This step additionally increases the national focus in dealing with competitiveness problems. The rationale for the transfer of responsibility from supranational to national level is mainly

founded on the understanding that national specifics require national solutions. However, it remains unclear how national authorities are supposed to design structural reforms and industrial policies in the framework of the current EU competition policy and the single market. Due to the restrictions posed by community legislation, the key recommendations for national competitive policy measures and supervision are related to internal devaluation and boosting price competitiveness. The Five Presidents' Report (2015) confirms this agenda and states that the competitiveness authorities should be independent entities with a mandate to *'assess whether wages are evolving in line with productivity and compare with developments in other euro area countries and in the main comparable trading partners'* (p. 7). Later these authorities are renamed into national productivity boards, however, their mandate and aim are the same.

The Communication 'For a European Industrial Renaissance' launched by the European Commission (2014) is elaborated along the same lines. The aim of the policy document is to trigger a back-shoring of manufacturing capacity in knowledge-intensive sectors from China and other emerging markets to Europe by improving the EU price and cost competitiveness. This communication focuses on reversing industrial decline and reaching the target of 20% of GDP for manufacturing activities by 2020. The document outlines the priority for identification of "key enabling technologies" where investment activity would be focused. However, the EC calls for nationally tailored measures, but it remains unclear how the national actions could be coordinated within the Union and its legal framework and how the supranational strategic directions would be transferred at national level.

Up to this point, it could be concluded that the first steps for re-introducing industrial policy measures in the post-crisis period, as response to the calls to specific actions for competitiveness and convergence, are weak and lack strategic long-term view on the development path of the EU and its members. The suggested actions are mainly designed in the context of the EU competition and antitrust legislative setting. There is unambiguous resolution that the industrial policy of the 70s is not applicable and would result in accumulation of new problems, nevertheless, there are no new effective propositions on the long-term competitive positions of the EU in global markets and on the measures for achieving recovery and progress. The persisting problem of EU divergence and structural disparities are not addressed, despite their role for the overall competitiveness issues of the EU.

2.3. The significance of the Siemens-Alstom case

The Siemens-Alstom merger case of 2019 is a good illustration of the identified weaknesses in policy making in re-industrialization and competitiveness in the last decade.

On 6th of February 2019 the European Commission blocked the merger between the two companies as it “would have harmed competition in markets for railway signalling systems and very high-speed trains”. The decision is based on analysis of the EU market and the merger is blocked because of a problem with higher concentration in EU rail market.

However, the two corporations initiate a merger in order to compete globally. The global competition in railway vehicles is currently dominated by the Chinese CRRC, operating globally since 2015 as result of a merger between two of Chinese companies. If the European leaders were to merge, they would have competed together against the Chinese CRRC. The merged company would have been roughly half the size of CRRC. Despite dominating the European market, it turns out that the European leaders in the railway industry have no real chance in global markets because of limited capacity.

The EU competition policy has stringent rules regarding M&As and the control on them is delegated to the Commission. The EC has acted according to the rules and, after analysing the structure of the European market, has rejected the merger. However, in this case, dominance in the European markets was not the ultimate goal for the merging companies and the strategic move was not undertaken to affect regional competition as the EU railway market is considered to be saturated. The strategy of Siemens and Alstom was to merge into a single “European champion” (similarly to the Chinese strategy of 2015) that would become a global competitor and, potentially, leader in the industry.

The case Siemens-Alstom raises two questions: Is it possible to reconcile a European industrial policy with competition policy and should EU competition policy be changed to facilitate the formation of ‘European champions’?

After the strong political reaction, the European Commission announces a new course of action – “EU Industrial Policy after Siemens-Alstom. Finding a new balance between openness and protection”. Despite the title, the policy paper does not provide “a new balance”. There is a clear commitment to defending the principle of free competition and non-intervention in markets. Although there is a recognition of non-competitive and protectionist measures by international competition, especially in Asia, and the positive effect of these technological leadership measures is confirmed, the EC clearly states that

these techniques have no place in the EU. The key message is that the international competition and global economic order should be subjected to the same rules of free competition and non-intervention that are respected in the EU (“openness must be a two-way street”), but it is not clear how this will be achieved. It is stated that Europe should remain the champion of free trade.

The last impulse in building EU industrial policy, however, recognizes the failure of the initial steps and the need for joint measures. In February 2019 it was announced the establishment of the European Innovation Council and key strategic sectors were identified: 1) automotive (incl. batteries); 2) energy systems; 3) the internet of things; 4) robotics, 5) artificial intelligence; 6) bio economy. In November 2019 the European Commission published expert recommendations on the “Renewed EU Industrial Policy Strategy” from 2017 where six industrial priorities are mentioned: 1) Clean, connected and autonomous vehicles; 2) smart health; 3) low CO₂ emissions industry; 4) hydrogen technologies and systems; 5) industrial internet of things; 6) cybersecurity. It is supposed that the EU has or should develop competitive advantages in these areas. However, action in these areas needs to be stepped up and accelerated if Europe is to stay in the global race.

The success of the envisioned industrial policy measures depends on the long-term goals policymakers set. Generally, the policy documents described above point to the unsatisfactory recovery and the loss of competitive advantages in high-technology sectors as the problems the industrial policy measure are supposed to address. However, the analysis of the effectiveness and the design of these measures should focus on the primary factors resulting in the identified problems. This would mean that the assessment of the modern EU industrial policy goes through analysis of 1) the external positions of European manufacturing and trade based on its technological and innovation capacity; 2) the internal structure of the EU and its functioning mechanisms.

3. Issues for the EU industrial policy – external positions and structural problems

3.1. External positions: lagging behind global technology leaders

As it was mentioned above, in early November 2019, the EC published recommendations to ensure Europe's leadership in international markets, identifying 6 strategic business sectors: 1) clean and autonomous vehicles; 2) hydrogen technologies and systems; 3) smart health; 4) industrial Internet of Things; 5) low carbon industry and 6) cybersecurity. These are the areas where the EU should have competitive advantages and take on a leadership role.

At the same time, only one fifth of the European companies are highly digitized. The European cybersecurity market represents 26% of the global market, but European companies in the sector hold only 5% of the market. EU investment in cybersecurity is roughly \$ 1-2 billion a year, while public investment in US cybersecurity is \$ 13 billion and China's investments are \$ 9 billion. The European automotive sector, traditionally regarded as a leader, has been losing competitive positions rapidly. The sector employs 12 million people (3 million in manufacturing, 4.3 million in maintenance and 4.8 million in transport) and represents 4% of the European GDP. The sector is considered as key industry for the European economy, but on a global scale, it is increasingly dominated by non-European companies, especially in strategic areas for the development of the industry. The production and technology of autonomous cars is led by US-based Waymo, and China leading the market in electric cars with 56% of global sales for 2018. While sales of China and the US increase by 80% in 2018 compared to 2017, European growth is only 34%.

Low carbon technologies are used in the steel, chemical and cement industries, but the EU also faces intense competitive pressure. In the United States, there is an investment boom in the chemical sector. China, the Middle East and India have made successful efforts to build large and increasingly sophisticated manufacturing facilities and attract high investment to compete with European exports. European cement production and value added are declining. At the same time, production volume is increasing significantly in China and India at the expense of EU market share. The cement market in Europe is suffering from low returns on investment.

It should be clearly pointed out that the EU's problem is related to retaining leading competitive positions in high technologies. EU is still considered a technological leader at global scale; however, its top positions are seriously threatened due to the faster pace in catching-up and expanding of developing and emerging economies. While in 2000 the size of the European economy is more than 7 times larger than that of China (8.9 trillion dollars for the EU versus China's 1.2 trillion dollars), today China has caught up, with an economy worth 13.6 trillion dollars, against 18.7 trillion for the EU (IMF data). The EU faces a situation where it is supposed to act against global rivals of different scale, background and policies. The need of new approach in global competition is evident.

The structural differences between the EU and the emerging economies are visible in their GDP components. Gross fixed capital formation in the EU amounts roughly to

20% of GDP (downward trend), which compares poorly to China and India with 43 and 29%, respectively (see table 1).

Table 1: Gross fixed capital formation, % of GDP

Country Name	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Euro area	22.04	22.70	23.21	22.93	21.10	20.69	20.77	20.17	19.55	19.53	19.91	20.16	20.43
EU	21.37	22.04	22.68	22.41	20.48	20.05	20.15	19.71	19.22	19.35	19.72	19.82	20.10
US	22.94	23.04	22.36	21.32	18.85	18.38	18.81	19.58	19.79	20.30	20.33	20.17	20.45
Russia	17.76	18.50	21.00	22.29	22.00	21.63	21.49	21.55	21.78	21.65	20.85	21.99	22.34
India	32.76	33.58	35.81	34.72	33.95	33.23	34.31	33.44	31.30	30.08	28.73	28.22	28.64
China	40.47	39.75	38.89	40.10	44.97	45.09	45.02	45.42	45.69	45.23	43.95	42.98	42.57
Japan	24.60	24.72	24.12	23.96	22.36	21.33	21.90	22.42	23.33	23.96	23.79	23.32	23.83

Source: World Bank, World Development Indicators dataset.

Industrial production (incl. construction) as percentage of GDP falls considerably in the last two decades in the EU and the Euro area; while India, China, Russia preserve the relative share of industrial value added (table 2).

Table 2: Industry (incl. construction) value added (% of GDP)

Country name	1995	2000	2005	2010	2015	2016	2017
Euro area	26.53	25.20	23.92	22.55	22.17	22.28	22.33
EU	26.59	25.07	23.69	22.39	21.97	21.99	21.87
US	..	22.45	21.22	19.36	18.52	17.95	18.21
Russia	34.54	33.92	32.63	30.00	29.89	29.46	30.47
China	46.75	45.54	47.02	46.50	41.11	40.07	40.54
India	28.53	27.28	29.53	30.73	27.35	26.64	26.50
Turkey	32.02	26.90	25.30	24.60	27.90	28.18	29.16
South Africa	31.92	29.07	27.14	27.38	26.03	26.25	26.29
Japan	34.41	32.76	30.20	28.44	29.02	28.91	29.14

Source: World Bank, World Development Indicators dataset.

If we go into further details and focus only on the share of manufacturing, the trend of its relatively negligible role will be confirmed. The manufacturing sector has still not recovered after the crisis and has not restored the relative pre-crisis levels. The more significant observation is related to the long-term weight of the sector in GDP. The manufacturing sector has low contribution in GDP – a fact confirming the high servicification and financialization of the European economy, specifically compared to the Asian countries (South Korea, Japan, China) and less investments in productive capacity. The Asian economies are characterized by larger manufacturing sectors which could be analysed further as a sign for the different development strategies and (in some cases) the different level of development the economies have currently reached. However, the political goal set for the EU is 20% share of manufacturing till 2020, which is not possible and does not correspond to its structural characteristics and problems.

Table 3: Manufacturing, value added (% of GDP)

Country Name	2005	2007	2009	2011	2012	2013	2014	2015	2016	2017	2018
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Euro area	15.81	15.84	13.81	14.67	14.49	14.40	14.52	14.97	15.10	15.11	15.08
European Union	15.11	15.02	13.31	14.06	13.84	13.80	13.93	14.29	14.39	14.30	14.18
Germany	20.31	21.09	17.88	20.57	20.42	20.18	20.47	20.69	21.09	21.06	20.83
Central Europe and the Baltics	18.34	18.42	17.19	18.31	17.86	17.66	18.55	18.82	19.02
Japan	21.64	22.08	19.15	19.67	19.73	19.44	19.73	20.81	20.68	20.73	..
United States	12.99	12.78	11.73	11.95	11.85	11.81	11.64	11.62	11.12	11.15	..
China	32.09	32.38	31.60	32.06	31.53	30.67	30.50	29.51	28.96	29.30	29.41
India	15.97	16.86	17.14	16.14	15.82	15.25	15.07	15.58	15.20	14.87	14.99
Korea, Rep.	25.52	25.46	26.05	28.48	28.17	28.24	27.49	27.09	26.78	27.57	27.23

Source: World Bank, World Development Indicators dataset.

3.2. External positions: limited innovation capacity

Digitalization in the EU is a slow process. Data from the EC’s Digital Transformation Scoreboard, 2018, shows that only 24% of the European companies use big data analytics. Robotics and automation are applied in not more than 16%. The companies working with artificial intelligence represent only 5% of European business. However, the information era developing in the last couple of decades makes digitalization and digital technologies the main prerequisites for progress and innovation. Digitalization transforms processes, business models, markets, and, from strategic point of view, competitive advantages and prospects for technological leadership. Considering global reality, the economic and technological transformation in the EU is not sufficient to create and sustain modern re-industrialization and to build the path for renewed, sustainable and more coherent development.

According to the Global Innovation Index, 2019, the geography of innovation in the world shifts from high-income to middle-income countries. Some EU countries are in the top positions, but China, Israel, India and the US are advancing faster. There is also a fast catching-up in innovation advances in South East Asia, East Asia, and Oceania region compared to Northern America and Europe. Europe (and most of EU member states) is still part of the largest innovators in the world, but it cannot surpass the US, and China is aggressively catching up threatening to get ahead. The most progressive region lately is found to be the South East Asia, East Asia, and Oceania.

The Global Innovation Index also documents the deficiencies of European innovation policy. On the first place, Europe’s innovation capacity and performance are not coherent; there are persistent differences within the EU. Despite the leadership positions of member states such as Germany and Sweden; Italy, Portugal, Latvia, Bulgaria, Slovakia, Poland, Romania are way behind. The distinction between innovators and laggards may be made based on the “North-South” divide; or the “Old members –

new members” one. Nevertheless, economic divergence in the EU is a fact and it has an impact on its overall performance and the implementation of re-industrialization and innovation strategic policies.

Secondly, the EU is strong in developing innovation inputs, but has problems with lower performance on business R&D or innovation outputs. The connection between science and business is not effective and does not deliver results. This situation is referred as the “EU paradox”: highly effective, quality educational and research systems, but unsatisfactory output in the form of marketable innovations. Third, the entrepreneurial activity in the EU is found to be more constrained than would be ideal which is significant constraint in the operation of start-ups and has a negative effect in building up innovative capacity.

The data on patent applications confirms the negative conclusions (table 4). EU is nowhere near the innovative activity of China, the US, Japan and East Asia. The start-up culture and technological entrepreneurship is underdeveloped in the EU.

Table 4: Number of patent applications

Patent applications	2010	2011	2012	2013	2014	2015	2016	2017
EU	134 009	134 681	136 659	137 642	139 301	131 323	140 672	139 458
Eurozone	100 699	100 612	101 336	102 879	105 096	96 432	106 987	106 322
East Asia and Pacific	988 123	1 134 028	1 269 626	1 448 150	1 553 260	1 726 643	1 959 178	1 997 563
Southern Asia	41 658	44 002	45 224	44 821	44 115	47 455	46 856	48 191
United States	490 226	503 582	542 815	571 612	578 802	589 410	605 571	606 956
Japan	344 598	342 610	342 796	328 436	325 989	318 721	318 381	318 479
China	391 177	526 412	652 777	825 136	928 177	1 101 864	1 338 503	1 381 594

Source: World Bank, World Development Indicators dataset.

The 2019 European Innovation Scoreboard makes the general conclusion the EU innovation performance increases. It is emphasized that, for the first time, the EU has surpassed the US. However, a closer look at the scoreboard’s components suggests that the EU performs better in some educational and scientific indicators, but the business implementation of innovations is a persisting problem. The EU performs worse compared to Japan, Canada, Australia and South Korea. China is catching up fast and EU consistently loses its lead to China; it is stated that China catches up at two times the EU’s innovation performance growth rate. Predominantly highly developed, old member states in the Northern part of the EU are categorized as innovation leaders and strong innovators. All new member states (excl. Estonia) are categorized as moderate and modest innovators.

3.3. External positions: trade imbalances

Generally, it is considered that the industrial policy measures are focused on boosting exporting capacity and export-led development. So, industrial policy is supposed to be designed according to external trade positions of the economy and its competitive advantages/disadvantages in global markets. The EU experiences certain imbalances in intra-EU and extra-EU trade.

Extra-EU trade is characterized by trade deficits – 17 out of 28 member states report negative trade balance in extra-EU trade. EU runs a trade deficit with the rest of the world. The trade imbalances are significantly reduced after the crisis, but, nevertheless, they still exist. Table 5 represents data on the largest deficits and surpluses in the last couple of years. The only considerable trade surplus is reported by Germany: it is nearly 5 time larger compared to the second highest position. Of course, more in-depth analysis is required for a proper and objective assessment of EU competitiveness in global markets, but the general impression is that the EU is net importer and the prospects for leadership based on exports and large role in global trade seem implausible.

Table 5 Extra-EU28 trade, trade balance

Extra-EU28 trade, trade balance, mln. Euros	2007	2009	2011	2013	2015	2017	2018
European Union - 28 countries	-216,448.2	-142,114.5	-174,622.8	49,885.8	65,145.5	23,809	-21,866.3
Largest deficits in:							
Netherlands	-95,014.6	-81,588.4	-118,001.9	-115,308.8	-125,439.7	-131,806.6	-139,417
United Kingdom	-79,823.6	-73,799.3	-71,131.8	-9,590.1	-31,224.9	-69,711.9	-51,088.3
Spain	-51,264.9	-30,122.6	-43,234.9	-25,962	-21,429.6	-30,098.4	-37,710.5
Poland	-10,971.5	-9,632.9	-15,812.5	-9,908.3	-14,774.4	-16,970	-25,737.5
Belgium	-13,392.3	-10,693.6	-12,759.7	-8,801.7	-24,728.1	-22,417.2	-28,220.4
Largest surpluses in:							
Germany	65,667.8	65,411.1	99,936.8	155,105.7	177,009.2	184,558.2	176,094
Ireland	14,010	16,726.3	20,729.7	19,579.4	28,739.6	31,166.2	36,629.3
Italy	-16,725.6	-3,963.9	-21,213.7	19,569.5	33,222	38,919.2	28,534.1
France	75.1	7,067.4	-1,599.9	12,238.2	28,831.9	28,559.2	25,994.9
Sweden	15,392.6	11,413.2	18,503.4	15,712.8	14,981.7	16,471.2	13,986.5
Denmark	2,985.8	3,859.2	7,531.7	8,539.9	9,716.3	9,781.8	9,977.2

Source: Eurostat

The intra-EU trade is considerably more intensive. Only two member states report larger extra-EU exports than the intra-EU exports – Cyprus and United Kingdom (2018 data, Eurostat). The predominance of intra-EU trade is significant in 16 member states reporting EU exports more than 2 times larger than their world exports. 11 out of 28 EU economies report intra-EU trade surpluses. Most member states run trade deficits in EU trade. One third of the countries run double deficits – in intra- and extra-EU trade. These facts mark the internal imbalances in the Union and signal for the existence of multi-

speed Europe, comprised of highly competitive economies dominating in internal markets and performing in world markets, and of less competitive countries both in common market and the global economy. Industrial policy measures are supposed to be based on this distinction and address the structural problems of the EU as a whole.

Another issue related to the outlined geographical structure of national exports is the possibility for constructing common industrial policy if most of the trade is in the EU, between the member states. As it was mentioned before, industrial policy measures are oriented towards increasing export capacity. If most efforts are on national level, it turns out that re-industrialization and export-led strategy of development would make the member states direct competitors and would result in even more significant divergence. As long as main exports of national economies are directed to the other EU member states, any development and leadership strategies would result in formation of winners and losers. There are two alternative options ahead of the EU: 1) increasing the role of EU in international markets; 2) moving away from the EU integration model as it naturally opposes countries in the field of competitiveness and growth and deepens imbalances and divergence. The integration process is too advanced to have effective national industrial and growth policies; and too far behind to have a community-based industrial policy based on internal specialization and export-oriented growth for the community (rather than individual countries) by turning to global markets.

3.4. Internal structure

Some of internal EU issues were already mentioned: 1) dominance of free-trade free-competition rhetoric not consistent with actual global reality; 2) internal trade imbalances as result of competitiveness differences; 3) economic divergence in the EU resulting in huge gap between North and South in the EU in terms of innovation capacity and technological leadership prospects.

Considering the described external processes and the overall performance of EU internationally, the internal EU imbalances gain even larger significance. The relative deterioration of external competitive positions makes the problem of internal imbalances even more acute, since EU strategy for positioning in the global economy must necessarily find solutions to the internal problems of regional divergence and different levels of development in the Member States.

The structure of the Union could be analyzed in two directions – the integration process and the accession process. It is essential to understand which one of the two

parallel processes has an impact on the problems in the EU in the last decades and which one of them could be changed in order to resolve the problems.

The integration process is defined by the rules for the functioning of the economic and monetary union – institutional and legal framework, transfer of national sovereign competences at supranational level. The integration process is based entirely on market reasoning for constructing economic union. Flaws of the integration process would result in similar outcome in all member states. For instance, the conflict mentioned above between competition policy and industrial policy at the EU level is result of the approach chosen for deepening the integration process. There are well developed mechanisms to prevent institutional failures, but no consistent approach towards market deficiencies. This may also partly explain regional divergence in the presence of a similar institutional environment, macroprudential policy and stabilization policy; similar regulatory regime.

The accession (or enlargement) process addresses the way new states are admitted. Problems in this process would result in difficulties in just some of the member states – the ones that meet the requirements for accession but have difficulties being part of the integrated area. The accession process is based on the so-called Copenhagen criteria which are not easily verifiable, and, at the end, the accession decision turns out to be purely political one. The mismatch and lack of consistency between the two processes results in regional divergence and structural problems which are difficult to solve once the states are part of the integrated market and must adopt its rules and provisions. It seems that the economic integration process is preceded by a political process of enlargement. As the political concept of EU construction and the core principles of integration are based on conflicting (sometimes, wrong) incentives, there are internal conflicts and imbalances between heterogenous groups of countries. Introducing a common approach in raising EU competitiveness may be difficult because of the economic heterogeneity.

The EU faces two major problems. First, there is a long-term downward trend in investment activity in the leading European economies. The factors behind the trend are market saturation and industrial overcapacity (Wigger, 2018). The slow growth in aggregate demand and the new business models of outsourcing and offshoring to low-wage countries also have their role. In the post-crisis period, the trend is more pronounced. The leading European economies need to find a way to restore their technological leadership and call for industrial policy measures. Secondly, significant part of the Union is still catching up the most developed part of EU. These countries need a

strategy for catching-up growth and industrial policy agenda for development /better use/ of their production capacities and creation of new competitive advantages in global markets.

4. Conclusions and recommendations

Based on the analysis so far on the evolution and key characteristics of industrial policy measures applied in the EU and nature of the main issues they are supposed to address and solve, certain conclusions could be drawn up:

- 1) The “new” industrial policy of the EU gives no common vision for the EU’s place in the global economy. The structural characteristics of the EU member states are not taken into account and there is a serious threat that the envisioned strategic directions are not achieved as they do not correspond to the existing capacity in many European economies and does not provide tools for their adaptation to the new agenda. It is inefficient as it does not take into account the structural characteristics of the Union (see also Botta (2014)).
- 2) Industrial policy is supposed to comply with the existing legal and economic framework, which basically makes the practical implementation of industrial policy impossible. The level of implementation does not matter as both national and EU industrial policies would be seriously constrained by the internal market framework and competition regulations (see also Pelkmans (2006)).
- 3) Because of the above-mentioned features, the EU industrial policy agenda envisages many horizontal measures without clear impact assessment criteria.
- 4) The predominant approach includes delegation of responsibilities to national governments (through national authorities and nationally based concrete measures) for industrial policymaking. However, national governments have no freedom in taking vertical measures for re-industrialization and boosting competitiveness which results in ineffective, palliative actions. On the other hand, the nationally based approach is not effective because it lacks complementarity and coherent, common outward-looking approach. This turns Member States into direct competitors in a moment when the EU is supposed to act as a single player in global markets in order to compete against large competitors like the US, China, Japan, South Asia.
- 5) One of the explicit messages of the “new” industrial policy of the EU is stronger positions in international trade. Considering that intra-EU trade is the predominant export for most of the member states, the question of intra-EU trade thought of as

export and securing export growth by trading within the EU becomes evident. The re-industrialization export strategy of the EU is supposed to have clear vision on the following issue: Is it acceptable for more competitive economies to secure economic growth through exports mainly to less competitive Member States, given that no mechanism is in place to correct structural differences and divergence between them. New industrial policy does not consider the existence of multi-speed Europe and may exacerbate inequality.

The recommendations that could be made are in the following directions:

- 1) Economic divergence in the EU is identified as a challenge to be overcome by strategic industrial policies designed in the context of multi-speed Europe where non-convergence is recognized, and a joint growth strategy outward is elaborated. EU industrial policy measures would be more successful, if they envision vertical, sectoral approach and differentiate the goals and outcomes of its implementation in different member states. Differentiated approach does not translate into delegating the whole responsibility to national authorities. The Union approach is needed as it would build up the global image of the EU as a single player in international trade and world progress. The capabilities of each member state should be used and promoted as part of an integrated strategy. The EU level is too big, while national level is too small. Regional focus in industrial policy would provide tailored, effective measures for regional specialization and development.
- 2) The regional focus in EU industrial policy is supposed to result in structural changes reducing the gap between EU North and EU South. Concrete measures include subsidizing and fiscal stimulus; larger public financing of R&D in key sectors; targeted public procurement. Although the level of state intervention known from the 60s and the 70s of the last century is no longer plausible, a more interventionist industrial policy is needed. EU Cohesion policy tools and funds may have a central role in setting up differentiated strategy for re-industrialization.
- A modern concept of industry and industrialization should be developed. The tertiarization and financialization of the EU economy is a fact. However, the services sector and manufacturing merge together and the boundaries between them become more blurred. Financial sector is more of the most technologically advanced and pioneers in applying new business models based on innovative technologies. New industrial policy could be based on new methodology for classification of industries and sectors - not based on the final product, but on the

used technologies/ production methods. Analysis of the blurred boundaries between production and services is needed. Industrial policy measures could focus on the high value-added and marketable services sector, as well as business-related services interacting intensively with industrial manufacturing.

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THIS CONFERENCE PROGRAMME IS PRELIMINARY.
SOME INFORMATION AND SCHEDULES CAN BE CHANGED

Thursday - October 17th

9:00 - 9:30 am	Participants registration	Registration
09:30 – 9:45 am	Welcome speeches <i>Opening</i> <i>/ Large conference hall /</i>	Nikolay NENOVSKY, University of Picardie Jules Verne, UNWE, MRC, Bulgaria Statty STATEV, Rector of UNWE Tatiana HOUBENOVA, BAS, Chair of Union of Economist in Bulgaria Peter CHOBANOV, Former Minister of Finance, UNWE, MRC, Bulgaria
09:45 – 10:45 am	Round table on the topic of the conference <i>/ Large conference hall /</i>	Chair: Nikolay NENOVSKY, University of Picardie Jules Verne, UNWE, MRC, Bulgaria Participants: Xavier RICHET, University Sorbonne nouvelle, Paris, Jean Monnet Chaire ad personam, France Zineida ZLATANOVA, Former Deputy-Prime Minister, Former Minister of Justice in Bulgaria Ivailo KALFIN, Director of Economy and International Relations Institute, Sofia , Member of the EU High Level Group on Own Resources 2014-2017, Member of the European Parliament 2009-2014 Honorary Doctor Loughborough University, UK (To be confirmed) Dominique PLIHON, Université Paris 13, France Tatiana HOUBENOVA, BAS, Chair of Union of Economist in Bulgaria Peter CHOBANOV, Former Minister of Finance, UNWE, MRC, Bulgaria Diyana MITEVA, UNWE, MRC, Bulgaria Pencho PENCHEV, UNWE, MRC, Bulgaria
10:45 – 11:15 am	Coffee Break (University Canteen)	
11:15 - 13:15 pm	Plenary Session <i>/ Large conference hall /</i>	Session 1: Banking, crises, currencies- Moderator: Tatiana HOUBENOVA, BAS, Chair of Union of Economist in Bulgaria Speakers: Vadim O. GRISHCHENKO, Bank of Russia <i>/Does money multiplier exist in Russia? An empirical test/</i> Dominique PLIHON, Université Paris 13, France, Esther JEFFERS, CRIISEA, University of Picardie Jules Verne, France, <i>/The Historical Evolution of Central Banks: Are We on the Verge of a New Era ?/</i> Kiril TOCHKOV, Texas University, USA <i>/A Nonparametric Approach to Government Bond Yield Convergence in Central and Eastern Europe/</i> Nikolay NENOVSKY, CRIISEA, UPJV, UNWE, MRC, Cornelia SAHLING, Peoples' Friendship University of Russia, <i>/Interpreting the Evolution of the Monetary Regime in Russia: The Political Economy of Rent seeking and central banking/</i> Gordon KERR, Cobden Partners, London, United Kingdom <i>/The Broken Road to European Federalisation/</i>
13:15 – 14:15 pm	Lunch (University Canteen)	



<p>14:15 – 16:15 pm</p>	<p>Presentation Session (2) (simultaneous)</p>	<p>Parallel session 1: Monetary and financial economics - Large conference hall Moderator: Cornelia SAHLING, Peoples' Friendship University of Russia</p> <p>Speakers: Tatiana HOUBENOVA, BAS, Chair of Union of Economist in Bulgaria /<i>The New Paradigm of Financial Markets' Development: Problems and Prospects for the Reform of the Economic and Monetary Union/</i> Darina KOLEVA, UNWE, Bulgaria /<i>The empirical approach to the exchange rate – monetary policy rules link: a review/</i> Irena NIKOLOVA, New Bulgarian University, Bulgaria /<i>International Trade and Foreign Exchange Challenges: Perspectives for Europe/</i> Rossitsa TONCHEVA, UNWE, MRC, Bulgaria /<i>Non-Bank Private Money in Bulgaria/</i> Sabbah GUEDDOUDJ, Lux-SIR, Luxembourg, Esther JEFFERS, CRIISEA, UPJV, France /<i>Purchases of private and public debt securities by the European Central Bank (ECB): what lessons can be drawn since 2015 ?/</i> Iskra BALKANSKA, ERI BAS, Bulgaria /<i>Trends in the European banks' development/</i> Nabil TANNIR, UPJV, MUBS Lebanon /<i>Lebanon: Monetary stability despite the economic crisis/</i></p> <hr/> <p>Parallel session 2: International economics – Small Conference Hall Moderator: Yovan Zafiroski, UKIM, Republic of North Macedonia</p> <p>Speakers: Galia MANCHEVA, UNWE, Bulgaria /<i>Foreign direct investments in the contest of political risk: The case study of the Western Balkans/</i> Levani KERESLIDZE, Georgian Technical University, Georgia /<i>On the Psychological Determinant of Personnel Management/</i> Nino PAPACHASHVILI, Sulkhon-Saba Orbeliani University, Georgia /<i>Digital Ecosystems for Better Economic Policy: Global vs Local/</i> Saif Eddine CHAIK, University Mohamed V Rabat, Morocco, Yasser MAYSSOUR, University of Strasbourg, France /<i>Discussion the term of the competitiveness: can we really define it?: review of literature/</i> Ketevan TCHANIDZE, Zeinab SURMANIDZE, Batumi Shota Rustaveli State University, Georgia /<i>Social Effect of Tax Benefits in Mountainous Regions/</i> Marko TIMCHEV, UNWE, Bulgaria /<i>Accounting business analysis in a balanced indicator system/</i> Irakli ZARKUA, PhD, Georgian Technical University, Georgia /<i>Challenges of Innovation Development: EU and Georgia/</i></p>
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20:00 – 23:00 pm	<p style="text-align: center;">17th October, 2019 20:00</p> <p style="text-align: center;">Welcome dinner Restaurant “Hadjidraganovite izbi” (traditional Bulgarian restaurant, Live music), 18, Hristo Belchev street (next to Vitosha boulevard) , See address HERE</p>
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Friday - October 18th

9:30 – 10:15 am	<p>Key note Speakers Sessions <i>/Large conference hall/</i></p>	<p>Chair: Nikolay NENOVSKY, CRIISEA, University of Picardie Jules Verne, UNWE, MRC, Bulgaria</p> <p>Keynote speakers: Xavier RICHEL, University Sorbonne nouvelle, Paris, Jean Monnet Chaire ad personam, France <i>/Between globalization and internal stability, the resistible Internationalization of the Renminbi/</i> Discussion Christian AZAIS, LISE-CNRS, France <i>/Labour Transformations in current capitalism: the grey zone in questions/</i> Discussion</p>
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10:15 - 10:45 am **Coffee Break (University Canteen)**

10:45 - 13:15 pm	<p>Parallel sessions (3)</p>	<p>Parallel session 1: Economic thought- Large conference hall</p> <p>Moderator: Olivier ROSELL, UPJV, CRIISEA, France</p> <p>Speakers: Jérôme MAUCOURANT, L'Université Jean Monnet de Saint-Etienne, France <i>/Sovereignty and Economy according to Montchrestien and Cantillon/</i> Alexander MALTSEV, Ural State University of Economics, Russia <i>/Economic history: a stepchild of economics or the queen of social sciences ?/</i> Plamen TCHIPEV, Plovdiv university, ERI AT BAS, Bulgaria <i>/Political Economy of Socialism: Theoretical and Practical Controversies of “All-People Socialist” Ownership/</i> Wissam SAMIA, UPJV, France <i>/Antûn SAADEH and the actuality of his social-nationalist doctrine?/</i> Gabriel SHOUYI ZHANG, CRIISEA, UPJV, France <i>/Strategies for Monetary Reforms: Money Doctors and Chinese Economists during Monetary Reforms in China at the 1930s/</i></p>
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		<p>Parallel session 2: Social economy – Small conference hall</p> <p>Moderator: Tsvetelina MARINOVA, New Bulgarian University, Bulgaria</p> <p>Speakers: Krasimir KOSTENAROV, Ivan BOEVSKI, Angel SAROVNew Bulgarian University, Bulgaria /<i>Members satisfaction as main reason for recent cooperatives development in Bulgaria/</i> Esther JEFFERS, CRIISEA, UPJV, France, Tsvetelina MARINOVA, New Bulgarian University, Bulgaria, , Maya JANDAH, UPJV, CRIISEA, France /Birth and development of cooperative financial institutions in France, Germany, Bulgaria and Serbia: an institutionalist approach/ Hristiyan ATANASOV, University of Library Studies and Information Technologies, Bulgaria /Credit institutions and social economy in the Ottoman Balkans during the 18th and 19th centuries / Zuzana POLACKOVA, Institute for forecasting, Slovak academy of sciences, Slovakia /Solidarity with the people with disability and their right for decent jobs/ Petar MIHAYLOV, Fund manager of financial instruments in Bulgaria" JSC, Bulgaria /Instruments in support of start-ups and SMEs/ Elena SPASOVA, New Bulgarian University, Bulgaria /EU convergence and competitiveness: in search of modern industrial policy/</p>
<p>13:15 – 14:15 pm</p>	<p>Lunch (University Canteen)</p>	
<p>14:15 - 16:00 pm</p>	<p>Presentation Session <i>Large conference hall</i></p>	<p>PhD Session <i>Large conference hall</i></p> <p>Moderator: Olivier ROSELL, UPJV, CRIISEA, France</p> <p>Speakers: Quang NGUYEN, University of Picardie Jules Verne, France /An Empirical Relationship between Exchange Rates and Inflation: The case of Vietnam (1995-2016)/ Nikoleta KARAMILEVA, UNWE, Bulgaria /Monetary perspectives for EU grown from Finance Philosophy/ Zdravka KIRICHEVA, UNWE, Bulgaria /Application of Cost-Volume-Profit Analysis for Stock Operations Management/ Chaimae AAMOUM , University of Picardie Jules Verne, France, / The monetary tradition(s) among Arab-Muslim authors of the Middle Ages through the functions of money /in French/ Iris NIKOLOPOULOU, Paris 7 – Denis Diderot University, France /The Greek capitalism through the prism of the debt crisis: institutional characteristics and sustainability of accumulation/ Marios PSYCHALIS, University of Peloponnese, Greece /The Euro Plus Pact Structure: A Path for Measuring its Adoption/ via Skype, Ivanina MANCHEVA, UNWE, Bulgaria /Digital tax implementation in EU – possibilities and outcomes/ Ilina MOUTAFCHIEVA, UNWE, Bulgaria /Sustainable development goals - opportunities and perspectives for international management/</p>



Saturday - October 19th, 2019

<p>9:00 – 18:00</p>	<p>One day excursion. <i>Bus leaves from Park Hotel Vitosha</i></p>	<p>Visiting town of Melnik and Rupite area. For additional information visit the website of the conference. www.conference.mrccenter.info</p>
<p>16:00 - 16:15 pm</p>	<p>Closing remarks</p>	<p>Nikolay NENOVSKY, Director of MRC</p>
<p>Friday 18th October, 2019 21:00 pm</p>	<p>SOCIAL EVENT Sofia Pub Crawl</p>	