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Socio-Psychological Peculiarities and Level of Financial Literacy of Russian Debtors

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Abstract. This article is devoted to investigation of role of financial literacy and socio-psychological factors in borrowing and debt behavior. Topicality of the problem is caused by necessity to understand the causes, except economic, leading to delays in debt repayment and therefore increasing debt burden. This work presents the basic theoretical approaches to the problem of debtors, debt behavior concepts and connections between debt behavior, financial literacy, social and demographic characteristics and personality traits in accordance with the results of international research. Results of empirical investigation are presented, which reflect differences in financial literacy and socio-psychological characteristics of non-borrowers, borrowers and debtors. In conclusion, debtors do not differ from borrowers, who pay their bills in due course, by social and demographic characteristics, but there is a significant difference in their psychological characteristics. Debtors demonstrate higher tolerance to debts and irrationality in debt behavior and lower level of conscientiousness than non-borrowers and borrowers/payers. Non-borrowers do not differ significantly from borrowers/payers in psychological characteristics but differ significantly from them in socio-demographic characteristics and financial literacy. Results got by the authors are in agreement with the data obtained in Russian and foreign scientific researches.

Keywords: debtor; borrower; borrowing; debt behavior; debt repayment; financial literacy; debt literacy; socio-psychological characteristics; big five personality traits; locus of control; debt attitudes.

Социально-психологические особенности и уровень финансовой грамотности должников

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Аннотация. Данная статья посвящена исследованию роли уровня финансовой грамотности и социально-психологических факторов в заимствующем и долговом поведении. Актуальность темы исследования обусловлена необходимостью понимания причин, помимо сугубо экономических, побуждающих лиц к несвоевременному погашению задолженности и приводящих к росту долгового бремени. В работе проанализированы основные теоретические подходы к определению должников и долгового поведения, показана связь долгового поведения с психологическими характеристиками респондентов и их уровнем финансовой грамотности по результатам зарубежных исследований. На основании результатов эмпирического исследования представлены различия по социально-психологическим характеристикам и уровню финансовой грамотности у лиц, не имеющих займов, заемщиков, не имеющих задолженности, и должников. Сделан вывод, что должники не отличаются от заемщиков, своевременно осуществляющих платежи по социальным и демографическим характеристикам, но отличаются от них по психологическим характеристикам. Должники, по сравнению с плательщиками и незаемщиками, имеют более нерациональное долговое поведение и более низкие показатели избегания долгов, а также более низкий уровень сознательности. Лица, не имеющие опыта заимствования, не отличаются от заемщиков-плательщиков по психологическим характеристикам, но отличаются по социально-демографическим характеристикам и по финансовой грамотности. Полученные авторами результаты согласуются с данными других отечественных и зарубежных научных исследований.

Ключевые слова: должник; заемщик; заимствующее поведение; долговое поведение; финансовая грамотность; долговая грамотность; социально-психологические особенности; большая пятерка личностных черт; локус контроля; долговые преставления.

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INTRODUCTION**Relevance of the study**

The urgency of studying the role of financial literacy and socio-psychological characteristics in debt behavior is underpinned by the growing indebtedness of the population and the need to determine the factors that influence its dynamics. The problem of borrowing and debt is not fully investigated on Russian sample because of two reasons: late emergency of credit card market and the wide-spread habit of borrowing from individuals (relatives and friends) which is difficult to study objectively. These socio-economic and cultural peculiarities of borrowing in our country do not let us simply use foreign scientific experience in debt behavior. In general, the analysis of debt behavior should take into account a va-

riety of factors, such as the financial ability to meet one's debt obligations, readiness and desire to perform, understanding of the mechanisms of debt formation, as well as individual characteristics such as integrity, conscientiousness, responsibility. Another important aspect is a person's ability to see the cause-and-effect relationships between their actions and what is happening in their life.

Knowing what factors play a leading role in the transition from borrowing to "bad debt" behavior will help to develop a more effective system of measures to prevent the growth of debt among the population in the future.

Decisions on borrowing call for knowledge of certain financial products and familiarity with the fundamentals of financial calculations. There is good reason to believe that the higher the level of financial literacy, the more rational decisions, including the ones on borrowing, the respondents will take. Together with the ability to limit oneself and direct available funds to repay debt, these characteristics can be the basis of effective debt management. That is, we assume the following:

in order not to become bad debtor, it is necessary to (1) gain a deep understanding of what a loan is and how it is to be paid; (2) be able to relate the resources available to those that would be required to repay the debt and (3) have certain psychological characteristics, such as emotional stability, conscientiousness, responsibility and internality for action to repay the loan. It is worth emphasizing that the problem calls for a systematic, multi-factor approach. Our previous studies (Gagarina, 2015; Smurygina, Gagarina 2016) have shown that the knowledge of the basic concept like «credit» and «loan interest» does not guarantee in itself the ability to apply this knowledge in practice and make the right decisions, like the ones on the order of loan repayment in case of multiple debts [1; 2433]. However, it goes without saying that the absence of such knowledge adversely affects the decision.

Background

We start our review from the terms which are mentioned in the heading of the article and make an overview of the developments that already exist in the field of debt behavior.

Financial literacy is defined as “a combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing” (Organization for Economic Co-operation and Development (OECD)/International Network on Financial Education (INFE), 2012). In its projects aimed at improving national strategies for financial education, the Organization for Economic Cooperation and Development (OECD) recommends to consider the study of financial literacy as a multi-step process that depends on financial, economic and social circumstances of people/households. The initial stage involves the acquaintance with such basic concepts as the characteristics and use of financial products, and then proceeds to more complex steps like the comprehension of financial concepts and development of skills and attitudes necessary for managing personal finances in the short and long term. As a result, all stages of development of financial literacy suggest positive changes in the behavioral patterns of citizens and households.

Research by Lusardi & Tufano (2009) suggests that households with low level of financial literacy tend to borrow money at a higher interest rate.

They are also less likely to plan out their retirement savings, have a lower propensity to save, and they prone to experience difficulties with payment of mortgage loans [30].

It is not so easy to define “debt” and “debtors”. According to Dronova (2015), in Russian language the word “debt” has at least two different meanings: debt as something borrowed and obligated to be returned back (usually in terms goods or money), as synonym to “indebtedness” and “a loan” it can be met in manuscripts in XII–XIII century; and debt as a moral obligation (like sacred duty, filial duty or duty to the motherland), which can be seen in ancient text in XVI century [4]. Because a single word “debt” is used for both loans and dues, then while speaking about “debt behavior” we have to clarify that we actually mean borrowing. Borrowing behavior can be viewed in different ways. Firstly, it can be divided into institutional and non-institutional borrowing — that is, borrowing from an organization or from an individual. This classification is often used in sociological research, for example, in the PhD thesis A.A. Dikiy (2012) and A.I. Faizullina (2007) [3; 6]. Meanwhile, proponents of this approach refer to this type of borrowing behavior as “debt behavior”. Necessity to distinguish between “debt” and “credit” in also of great concern. That is borrowing can be divided in accordance with the degree of repayment: those authors differentiate between loans (credit), outstanding debt (which is often treated as doubtful debt) and bad (distressed) debts. In the first case, we are talking about loans that can be repaid on time and in full; in the second case, there is a late payment on a loan or a payment is made not in full; and in the third case we are dealing with debt that remains unpaid because of the large size of the debt or because the debtor does not intend to pay it. These categories are applied in the works of Lea, S.E.G., P. Webley & R.M. Levine (1993), and Lea, S. E. G., Webley, P. & Walker, C.M. (1995) [27; 28]. Consequently, we can consider “credit behavior” (associated with borrowing in general and credit paid in time and in full) and “debt behavior” (associated with debt outstanding past due date and bad debt). In these studies, as well as in some other ones, debt is seen as a forced inability to make a payment that needs to be made, while credit is a deferred payment that will be made in accordance with the contract between the borrower and lender. In accordance with this approach to debt,

we distinguish among the borrowers those who are “non-debtors”, “minor debtors” and “serious debtors” (Lea, S. E. G., Webley, P. & Walker, C.M. (1995)) [28].

Thus, we face the question: who should be kept in mind by the term “debtor”? Firstly, it was proved by Dearden, C., Goode J., Whitfield, G. & Cox, L. (2010) that economists and ordinary people understand this in different ways [15, p. 11]. Objective measures are those derived from legal and statistical measures and often use quantitative indicators, while subjective definitions are more qualitative and self-declared by nature. Secondly, one can be a debtor, but not a borrower — how are we to deal with this case?

After analyzing the characteristics of the respondents described in various English-language articles, the title of which included the words “debt”, “debt behavior” and “indebtedness”, we found out that Achtziger, A., Hubert, M., Kenning, P., Raab, G. & Reisch, L. (2015); Dunn, L. F. & Mirzaie, I. A. (2011); Harrison, N., Agnew, S. & Serido, J. (2015); Jenkins, R., Bhugra, D., Bebbington, P., Brugha, T., Farrell, M., Coid, J. Fryers, T., Weich, S., Singleton, N. & Meltzer, H. (2008) apply the term “debtor” to people who just have mortgages, credit cards, auto loans and education loans [7; 18; 22; 25]; Brown, Taylor, Price (2005) use these works interchangeably [12] and Gathergood, J. (2012); Gathergood, J. & Weber J. (2014); Lusardi, A., and Tufano, P. (2009) apply debt to those who have late payments and arrears on loans [20; 19; 30]. To talk about bad debts, in addition to the term “problem debt” that reflects the inability and/or unwillingness to repay the loan or pay for goods and services on time and in full used in Jones, L.E., Loibl, C. & Tennyson, S. (2015)) [26], another term (not used in Russian language) “over-indebtedness”, which implies overdue loans and a subjective definition of borrowing as conjugate with financial problems applied in works of Dunn, L. F. & Mirzaie, I. A. (2011) and Harrison, N., Agnew, S. & Serido, J. (2015) [18, 22].

All in all, in our survey, we distinguished between borrowers/payers (those having loan of any type or borrowing from individuals) and debtors (borrowers with overdue loans and missed payments) and non-borrowers.

Debt behavior and borrowing behavior can be analyzed with a focus on their causes. That type of works is devoted to the search of predictors of debt behavior, which include, for instance, self-control

and time perspective, like in the study by Webley & Nyhus (2001) [34]. However, it is not always possible to distinguish a sound cause-and-effect relationship between individual characteristics and debt accumulation. For example, Gathergood’s works (2012) state that a low level of self-control leads to higher debt, as respondents with weak self-control often use short-term but expensive loans, and the increase in debt is due to low self-control, not financial literacy [20]. Meanwhile, Achtziger, A., Hubert, M., Kenning, P., Raab, G. & Reisch, L. argue in their research (2015) that the link between low self-control and a high level of debt is mediated, and it is related to the inability (or reduced ability) to monitor and control the need to make purchases [7].

Due to the inability to detect cause-and-effect relationships, many works are basically devoted to identification of various characteristics (personal, behavioral, and so on) of debtors and their differences from borrowers and from people who don’t borrow at all.

Relatively well developed is the problem of the connection between attitudes and debt behaviors. In their work, Davies, E., Lea, S. E. G. (1995) discovered the relationship between pro- and anti-debt attitudes in students with the amounts of debt outstanding and their readiness to spend money on maintaining certain living standards. Pro-debt attitudes turned out to be positively correlated with the larger amounts of arrears [14]. Besides, there are studies that confirm the link between personality traits and financial decision-making such as unsecure debt and financial assets. Brown, S. & Taylor (2014) have shown that extraversion and agreeableness have a significant positive correlation with the amount of debt, while conscientiousness has a negative correlation with it. The only personality trait that does not give any meaningful correlation neither with the size of the debt, nor with the ownership of assets, is neuroticism [11]. These conclusions contradict the results obtained by other researchers; according to Webley & Nyhus (2001), for example, emotional instability is a positive predictor of debt [34].

Many studies focus on the (generally negative) influence of debts on physical and mental health of debtors. A number of epidemiological studies, like the ones by Gathergood (2012) or Hojman et al. (2013) [20; 23], have shown that the existence of outstanding debt is a significant predictor of depression.

It goes without saying that debt behavior is determined not only by personal traits or attitudes, but also by the knowledge and understanding of economic processes and phenomena — that is, by the level of financial literacy, which was defined at the beginning of this article. This fact is proved by a number of empirical studies. The works by Disney & Gathergood (2013) show the role that financial literacy plays in the formation of one's credit portfolio. To assess the level financial literacy of the respondents, the latter were asked three questions: (1) a simple question on the calculation of interest, (2) a question on the understanding of the accumulation of interest on a loan and (3) the question related to the minimum payment. In addition, two more features were estimated: the level of self-consciousness in relation to financial literacy and the behavior aimed at improving it. The respondents who take consumer loans demonstrate a lower level of financial literacy than those who do not borrow at all. Besides, borrowers with a low level of financial literacy tend to take more expensive loans, as compared with borrowers with a high level of financial literacy. Despite the awareness of their incompetence in financial matters, people with a low level of financial literacy are less willing to attempt to improve their understanding of the credit market — for example, to read the financial press or receive information about new, favorable loan offers [17].

The results of J. Gathergood's research (2012) provide convincing evidence that the lack of self-control and a low level of financial literacy are positively correlated with defaults on consumer loans and self-reports of excessive debt burden. However, the analysis showed that the lack of self-control plays a greater role as the explanation of over-indebtedness, as compared to the financial literacy [20]. It should be noted, however, that the increase in the level of financial literacy can lead to ambiguous consequences; for example, Brown, M., Grigsby, J., van der Klaauw, W., Wen, J. & Zafar, B. (2014) studied the effect of taking courses in finance on the future indebtedness. It turned out that studying mathematics and improving financial literacy does reduce the negative consequences such as bankruptcy and debt accumulation, but at the same time it also stimulates participation in the debt market and leads to an increase in the number of loans, which in turn can result in negative consequences in the future [10]. In addition, Gather-

good, J. & Weber J. (2014) revealed the relationship between the high level of financial literacy and the so-called "co-holding" — simultaneous ownership of expensive credits and illiquid deposit accounts. According to the information from their article, 12% of all households are "co-holders". The average amount they owe to the bank is £3,800 and they make regular payments to pay down the borrowed amount and the interest set by the bank, in spite of having enough assets to cover all their credits at once. Co-holders generally have a higher level of financial literacy, their income is above average, and they also tend to be well educated. It was established that co-holding is linked to impulsive purchases and is often used as a way to control one's spending, that is, as coping strategy [19].

So, what are the key factors that determine the level of financial literacy? Grohmann, A., Kouwenberg, R. & Menkhoff, L. (2015) distinguish three main predictors: family, school and work. In their paper, the authors combined two directions of research — the study of financial socialization, defining the role of a child's experience in the formation of financial knowledge and behavior, and studies on financial literacy, describing the impact of financial literacy on the financial behavior of adults [21]. Thus, financial literacy serves as a link between the variables describing childhood experiences and adult economic behavior. Five scales serve as the childhood experience variables: parental education, financial socialization provided by parents, Economics lessons taught at the school, the quality of education, and financial socialization through experience of dealing with money in life or at work. To assess the level of financial literacy the researchers used the method developed by Lusardi & Mitchell — an assessment tool comprising three questions concerning the basic financial concepts: interest rates, inflation and diversification [30]. The researchers also used the number of available types of financial assets (except for savings accounts, which all respondents had) as an indicator of effective financial decision-making. The results showed two main directions to explain the effect of childhood experience on the level of financial literacy of adults. The first is the financial socialization provided by parents through teaching their kids to manage their budget and through encouraging savings behavior, which directly leads to improvement of financial literacy. In addition, provision of financial socialization of children by

parents leads to the development of quantitative thinking (numeracy) and thus indirectly improves financial literacy. The second channel used to explain the role of the childhood experience in the formation of financial literacy is learning at school. In this case, the study of economics at school and a higher quality of education have an indirect effect on developing numeracy and thereby also contribute to improving financial literacy. The results confirmed that a higher level of financial literacy is associated with more efficient financial solutions.

METHODS

The aim of our study was to identify the relationship between social and psychological characteristics and the level of financial literacy on the one hand, and borrowing and debt behavior of Russian people on the other. Approximately 252 respondents aged from 18 to 67 took part in assessment; $M=38,0$ $SD10,8$; 158 women, 92 men (others not identified). In our survey we used snowball sampling. It is a non-probability sampling technique where existing study subjects recruit future subjects from among their acquaintances.

The survey itself is comprised of approximately 130 questions.

The hypothesis of this study, as has been described above, is that the differences between non-borrowers, borrowers fulfilling their obligations in full, and debtors come in three flavors: firstly, the willingness to borrow money and tolerance for the presence of loan; secondly, theoretical understanding of what a loan is and how it is to be paid, as well as the ability to match the available resources with one's needs (financial and debt literacy); and, thirdly, there are certain psychological characteristics — such as emotional stability, awareness, responsibility and internality — which enable borrowers to take action to repay the loan.

To check the first part of hypothesis we included a block of questions to gather information about gender, age, level of education, marital status, number of children, experience of borrowing and types of borrowing (if any) in the past, existence of outstanding loans at the moment, presence of arrears of payments, expectations about one's own solvency within the next year and the willingness to take advantage of borrowing in microfinance institutions.

The second block included questions on financial (particularly debt) literacy. To determine

the level of financial literacy, we used the method described in the works of Lusardi & Tufano (2009) and Disney & Gathergood (2012) [20; 30]. The questions were translated into Russian and adapted: the amount shown in native currency and the interest rates were chosen in accordance with the real-life rates charged by Russian banks. Thus, the block of questions for assessing financial literacy included three questions that reveal one's understanding of the basic concepts:

I. "Marina has a credit card debt in the amount of 10,000 rubles; the annual interest rate is 15% per year. If she does not make payments to cover the arrears, what will be the amount she owes in 1 year, taking into account the interest rate? (Penalties and fines are excluded)"

A) 8,500 rubles; B) 10,000 rubles; C) 11,500 rubles; D) 15,000 rubles; E) I don't know

II. "Sergei has a credit card debt in the amount of 10,000 rubles; the annual interest rate is 20% per year. If he does not make payments to cover the arrears, how many years will it take for his debt to double?"

A) Less than 5 years; B) from 5 to 10 years; C) more than 10 years; D) I don't know

III. "David has a credit card debt in the amount of 30,000 rubles; the annual interest rate is 12% per year (1% per month). He pays 300 rubles every month to cover the arrears, eliminating penalties and additional fees for using the card. How long will it take David to repay the debt in full under these conditions?"

A) Less than 5 years; B) from 5 to 10 years; C) more than 10 years; D) He won't repay the loan; E) I don't know

Two additional questions to clarify individual preferences in debt repayment were similar to questions described in Amar, Ariely, Ayal (2011) [8]: "3,000 rubles task" and "30,000 rubles task". "3,000 rubles task". Respondents were asked to imagine that they have two credit card accounts: a MasterCard account with a 3,000 rubles balance and a 19% annual percentage rate (APR), and a Visa account with a 30,000 rubles balance and a 24% APR. If they had just received either a 3,000 rubles or a 30,000 rubles bonus which account they would repay completely or how much would they pay on each account? Task was a multiple-choice test: there were three possible answers. In the "3,000 rubles task" the answers were: A) use all of the money (3,000 rubles) to pay down

the debt of 3,000 rubles, B) use all of the money to pay down the debt of 30,000 rubles, C) divide the sum between the arrays. In the “30,000 rubles task” the options were: A) repay the 3,000 rub. debt in full; B) repay the 30,000 rub. debt in full, C) divide the money between the arrears, but not in the proportion of 3,000 rub. and 27,000 rub.”

The third block contains psychodiagnostic techniques: “Debt behavior questionnaire by M. A. Gagarina”, “Locus of control” method and “The Big Five personality traits” technique. Because our main focus were psychological traits we included full versions of questionnaires. Debt behavior questionnaire by M. A. Gagarina comprises 30 questions which give us five scales (alpha Cronbach $\geq 0,75$): Debt avoidance, Rational debt behavior, Debt attitudes and Internality in debt. Locus of control questionnaire (in Russian) comprises 44 questions which give us 7 scales representing the level of internality in different spheres: general, achievements, failures, family relations, professional sphere, interpersonal relations and health. Big Five (in Russian) comprises 40 questions which give us 5 scales: Extraversion, Neuroticism, Openness to experience, Conscientiousness and Agreeableness.

EMPIRICAL RESULTS

Social and demographic characteristics

Sample characteristics are presented in Table 1.

All respondents are split into three groups (Variable “Group” in further analysis): Non-borrowers, Borrowers/payers, Debtors.

Non-borrowers — are individuals who deny having loans from any institutions or individuals.

Borrowers/payers — are individuals who have taken a loan from a bank or other organization or from an individual. We included word ‘payers’ to emphasize that they have no overdue loans (and did not have overdue debts in the past as well) and distinguish them from borrowers with delayed or missed payments and bad debts.

Debtors are individuals admitted that they had overdue loans or missed and delayed loan payments.

From Table 1 we can conclude that our typical respondent is a woman from 36 to 45 years old, married, having 2 children, with higher education and working in an organization.

The “non-borrowers” is mainly represented by individuals aged 18–25, with higher education, in

most cases having no children and with a similar proportion of married and divorced respondents. In half of the cases the respondents are employed by organizations; the proportions of self-employed and unemployed are nearly equal.

Borrowers/payers tend to fall into the 36 to 45-year-old category, with higher education, usually married and having two children, mostly being hired workers in organizations.

Debtors are mostly are mostly concentrated in the 36 to 45-year-old category, with higher education, usually married and having two children, employed by organizations. In comparison with two other groups, this category contains a higher proportion of men.

The most popular type of borrowing is consumer credit (73% of borrowing among payers and debtors), the next goes borrowing from relatives and friends (31%), then car loans, sometimes combined with consumer credit or borrowing from friends and relatives (22%) and after that comes mortgage (17%), followed by a combination of mortgage and other types of borrowing (13%) and the last are credit card (3%) and educational loan (1%).

No significant differences (Chi-square, $p < 0,050$) were found among frequencies of each type of borrowing among Debtors and Payers.

One-way ANOVA was conducted to compare social and demographic characteristics of participants across Debtors, Non-borrowers and Payers. The independent variable (factor) is the Group, the dependent variables include Age, Sex, Marital status, Number of children and Employment status. To move from non-interval (qualitative) data to interval (quantitate) we used the dummy variable technique: we coded social and demographic characteristics in binary system (0 and 1). The results are presented in Table 2 and they confirm the fact that there is a significant difference in social and demographic characteristics.

Summary statistics are presented in Table 3 and show that there are significant differences in Age, Marital status, Number of children between at least two groups.

We continue the Post Hoc analysis (Turkey HSD for unequal sample) for scales with significant values to see which groups differ from one another. The results are presented in Tables 4–7.

Table 4 represents the results for the variable Age: there is a significant difference between the

Table 1. Sample characteristics

	Non-borrowers	Borrowers/ payers	Debtors	General sample
N	89 (35%)	131 (52%)	31 (12%)	251
Female	57 (66%)	87 (66%)	14 (45%)	158 (63%)
Male	30 (34%)	44 (34%)	17 (55%)	91 (36%)
Not identified	2 (1%)	0	0	2 (1%)
18–25	42 (47%)	24 (18%)	8 (26%)	74 (30%)
26–35	21 (16%)	13 (15%)	8 (26%)	42 (16%)
36–45	26 (29%)	53 (40%)	11 (35%)	90 (36%)
46–55	7 (8%)	24 (18%)	3 (10%)	34 (14%)
Over 55	9 (7%)	1 (1%)	1 (3%)	11 (4%)
Two higher education or PhD	8 (8%)	23 (19%)	4 (13%)	35 (14%)
Higher education	71 (74%)	82 (66%)	19 (61%)	172 (69%)
Secondary (special) education	17 (18%)	19 (15%)	7 (23%)	44 (17%)
Married	48 (50%)	96 (79%)	21 (68%)	165 (66%)
Not married	41 (43%)	16 (13%)	4 (13%)	61 (25%)
Widow	0	1 (1%)	0	1 (<1%)
Divorced	7 (7%)	9 (8%)	5 (16%)	21 (8%)
Married several times	0	0	1 (3%)	1 (<1%)
Not identified	0	2 (1%)	0	2 (1%)
Children: 0	42 (44%)	21 (17%)	10 (32%)	73 (29%)
Children: 1	11 (12%)	35 (28%)	4 (13%)	50 (20%)
Children: 2	35 (37%)	53 (43%)	14 (45%)	102 (41%)
Children: 3	6 (6%)	12 (10%)	2 (7%)	20 (8%)
Children: 4	1 (1%)	1 (1%)	0	2 (1%)
Children: 5	0	1 (1%)	1 (1%)	2 (1%)
Children: 6	0	1 (1%)	0	1 (<1%)
Employed in organization	50 (52%)	77 (62%)	17 (55%)	144 (57%)
Self-employed	21 (22%)	28 (23%)	6 (19%)	55 (22%)
Unemployed	24 (25%)	19 (15%)	7 (23%)	51 (20%)
Parental leave	0	0	1 (3%)	1 (<1%)
Type of borrowing				
All groups	Chi-square	131 (81%)	31 (19%)	162
Consumer credit	0,06	58 (45%)	15 (48%)	73 (46%)
Borrowing from individuals	0,16	26 (20%)	5 (16%)	31 (19%)
Car loan (car loan plus credit from a bank or an individual)	1,33	20 (16%)	2 (6%)	22 (14%)
Mortgage	0,19	13 (10%)	4 (13%)	17 (11%)
Mortgage plus credit from bank or individual	2,75	8 (6%)	5 (16%)	13 (8%)
Credit card	0,71	3 (2%)	0	3 (2%)
Education loan	0,24	1 (<1%)	0	1 (<1%)

Table 2. Multivariate Tests of Significance (for social-demographics). Sigma-restricted parameterization. Effective hypothesis decomposition

	Test	Value	F	Effect	Error	p
Intercept	Wilks	0.005	4497.9	10	238	0,000000
Group	Wilks	0.783	3.1	20	476	0,000009

Table 3. Test of SS Whole Model vs. SS Residual (Social-demographics)

	Mult	Mult	Adj	SS	df	MS	SS	df	MS	F	p
Male	0.14	0.02	0.01	1.20	2	0.60	56.67	247	0.23	2.62	0.0745
Age	0.33	0.11	0.10	3110.1	2	1555.0	25434.9	247	102.98	15.10	0.0000
Married=1	0.30	0.09	0.08	4.85	2	2.43	50.92	247	0.21	11.77	0.0000
Not married=1	0.37	0.14	0.13	6.25	2	3.13	39.35	247	0.16	19.62	0.0000
Widow=1	0.06	0.00	0.00	0.00	2	0.00	0.99	247	0.00	0.45	0.6368
Divorced=1	0.11	0.01	0.00	0.22	2	0.11	19.02	247	0.08	1.40	0.2497
Children	0.27	0.07	0.06	21.41	2	10.71	277.61	247	1.12	9.53	0.0001
Employed=1	0.08	0.01	0.00	0.43	2	0.21	60.78	247	0.25	0.87	0.4212
Self-employed=1	0.06	0.00	0.00	0.16	2	0.08	42.74	247	0.17	0.47	0.6264
Unemployed=1	0.15	0.02	0.01	0.88	2	0.44	39.12	247	0.16	2.78	0.0637

score for Non-borrowers and Borrowers/payers. Non-borrowers are significantly younger (Table 4) and comprise a higher proportion of individuals from 18 to 25 years old (Table 2).

Table 5 represents the results for the variable Children: there is a significant difference in the score for Non-borrowers and Borrowers/payers. Non-borrowers have significantly fewer children (Table 4) than Borrowers/payers. While both groups have a similar proportion of individuals with two children, the Non-borrowers group contains more individuals without children (Table 2).

Tables 6 and 7 represent the results for the variables Married and Not-married. In this case we include both variants in the analysis because

they are not just two opposite options — we also have other types of marital statuses, such as widow and divorced and they all were presented in a multiple choice questionnaire. Non-borrowers tend to be married more rarely, as compared to Borrowers/payers and they tend to be single (not married) more often than two other groups of respondents.

We can conclude that Non-borrowers differ from the other groups the most due to their age: they are younger and that is why they tend to be married more rarely and have fewer children than Borrowers/payers.

There is no significant difference between the two other types of borrowers: Payers and Debtors.

Table 4. Unequal N HSD; variable Age (Social-demographic) Approximate Probabilities for Post Hoc Tests Error: Between MS = 102,98, df = 247,00

	Group	Payers 41.0	Non-borrowers 33.3	Debtors 37.2
1	Payers 41.0		0.000023	0.308245
2	Non-borrowers 33.3	0.000023		0.285392
3	Debtors 37.2	0.308245	0.285392	

Table 5. Unequal N HSD; variable Children (Social-demographic) Approximate Probabilities for Post Hoc Tests Error: Between MS = 1,1239, df = 247,00

	Group	Payers 1.6	Non-borrowers 0.97	Debtors 1.39
1	Payers 1.6		0.000214	0.701796
2	Non-borrowers 0.97	0.000214		0.261311
3	Debtors 1.39	0.701796	0.261311	

Table 6. Unequal N HSD; variable Married=1 (Social-demographic) Approximate Probabilities for Post Hoc Tests Error: Between MS =,20624, df = 248,00

	Group	Payers 0.78	Non-borrowers 0.48	Debtors 0.71
1	Payers		0.000040	0.821331
2	Non-borrowers	0.000040		0.098022
3	Debtors	0.821331	0.098022	

Table 7. Unequal N HSD; variable Not married=1 (Social dempgraphic) Approximate Probabilities for Post Hoc Tests Error: Between MS =,15985, df = 248,00

	Group	Payers 0.12	Non-borrowers 0.46	Debtors 0.12
1	Payers		0.000022	0.997463
2	Non-borrowers	0.000022		0.003141
3	Debtors	0.997463	0.003141	

Personality traits analysis

In Tables 8 Descriptive statistics for personality traits are presented.

For each scale of Big Five personality test the respondents can earn from 0 to 16 point. In general, Non-borrowers and Borrowers/payers have average results on Extraversion, Neuroticism Openness to experience and above-average results on Conscientiousness and Agreeableness.

Debtors have average results on Extraversion, Conscientiousness and Agreeableness and above-average results on Neuroticism and Openness to experience.

Then we used one-way analysis of variance (ANOVA to determine whether there are any statistically significant differences between the means of the three independent groups: Non-borrowers, Borrowers/payers and Debtors. The independent variable is Group, the dependent

Table 8. Descriptive statistics, Big Five questionnaire

Group	Payers N=107		Non-borrowers N=54		Debtors N=27		All Grps N=188	
	M	SD	M	SD	M	SD	M	SD
Extraversion	7.3	3.3	7.6	3.1	7.7	3.5	7.4	3.2
Neuroticism	8.4	3.3	8.9	3.7	10	4	8.7	3.5
Openness to experience	9.4	2.8	9.8	2.7	10	3.2	9.6	2.9
Conscientiousness	11.9	3.2	11.6	2.8	9.5	3.1	11.5	3.2
Agreeableness	10.8	2.8	10.4	2.8	9.7	3.5	10.5	2.9

Table 9. Levene's Test for Homogeneity of Variances (Big Five) Effect: «Group» Degrees of freedom for all F's: 2, 185

	MS	MS	F	p
Extraversion	1.19	3.52	0.34	0.71398
Neuroticism	5.86	3.96	1.48	0.23016
Openness to experience	0.58	2.88	0.20	0.81661
Conscientiousness	1.71	3.30	0.52	0.59626
Agreeableness	8.68	3.12	2.78	0.06485

Table 10. Multivariate Tests of Significance (Big Five) Sigma-restricted parameterization Effective hypothesis decomposition

	Test	Value	F	Effect	Error	p
Intercept	Wilks	0.044562	776.1565	5	181	0.000000
Group	Wilks	0.884870	2.2830	10	362	0.013274

Table 11. Test of SS Whole Model vs. SS Residual (Big Five)

	Mult	Mult	Adj	SS	df	MS	SS	df	MS	F	p
E	0.05	0.00	-0.01	5.26	2	2.63	1949.21	185	10.54	0.25	0.7795
N	0.16	0.02	0.01	57.14	2	28.57	2267.56	185	12.26	2.33	0.1001
O	0.08	0.01	0.00	9.81	2	4.91	1518.37	185	8.21	0.60	0.5511
C	0.26	0.07	0.06	129.33	2	64.67	1743.48	185	9.42	6.86	0.0013
A	0.13	0.02	0.01	25.96	2	12.98	1553.02	185	8.39	1.55	0.2156

variables are the scales of the Big Five personality questionnaire — Extraversion (E), Neuroticism (N), Openness to experience (O), Conscientiousness (C) and Agreeableness (A).

To verify the possibility to employ ANOVA we used Kolmogorov-Smirnov test to check the normality of assumption: the dependent variables are

normally distributed in each group and then we used Levene's test to ensure that the variances are equal across groups or samples, see Table 9.

From Table 9 follows that there is homogeneity of variances and ANOVA can be used.

In Table 10 results of ANOVA for Big Five traits across groups are presented.

Table 12. Unequal N HSD; variable Conscientiousness (Big Five) Approximate Probabilities for Post Hoc Tests
Error: Between MS = 9,4242, df = 185,00

	debtors-payers-non	Payers 12.0	Non-borrowers 11.5	Debtors 9.5
1	Payers		0.805992	0.009657
2	Non-borrowers	0.805992		0.034859
3	Debtors	0.009657	0.034859	

Table 13. Descriptive statistics, Debt behavior questionnaire

Group	Payers N=107		Non-borrowers N=55		Debtors N=27		All Grps N=189	
	M	SD	M	SD	M	SD	M	SD
Debt avoidance	30.9	4.1	32.6	3.3	27.9	4.7	31	4.2
Rational debt behavior	32	4.7	32.1	3.8	28.8	4.6	31.6	4.6
Debt attitudes	20.3	4.5	21	5.6	22.1	5.9	20.8	5.1
Internality in debt	25.5	4.2	25.7	3.7	24.5	4	25.4	4

Table 14. Multivariate Tests of Significance (Debt behavior questionnaire) Sigma-restricted parameterization
Effective hypothesis decomposition

	Test	Value	F	Effect	Error	p
Intercept	Wilks	0.013139	3436.193	4	183	0.000000
Group	Wilks	0.835919	4.289	8	366	0.000060

Table 15. Test of SS Whole Model vs. SS Residual (Debt behavior questionnaire)

	Mult	Mult	Adj	SS	df	MS	SS	df	MS	F	p
Debt avoid.	0.35	0.12	0.11	405.7	2	202.85	2963.03	186	15.93	12.7	0.0000
Rational debt behav.	0.25	0.06	0.05	240.4	2	120.20	3657.75	186	19.67	6.1	0.0027
Debt attitud.	0.12	0.01	0.00	68.05	2	34.02	4762.06	186	25.60	1.3	0.2672
Inter-nality in debt	0.09	0.01	0.00	26.38	2	13.19	3012.95	186	16.20	0.8	0.4446

The values of Table 10 confirm the fact that there is a significant difference in personality traits across groups. We continue our analysis and found significant difference only in Conscientiousness (Table 11).

The Post Hoc analysis (Turkey honest significant difference HSD for unequal sample), pre-

sented in Table 12 shows that Debtors significantly differ from Non-borrowers and Borrowers/payers.

Debtors have a significantly lower level of Conscientiousness than Non-borrowers and Borrowers/payers. No significant difference in Conscientiousness between Non-borrowers and Borrowers/payers was found.

Table 16. Unequal N HSD; variable Debt avoidance (Debt behaviour questionnaire) Approximate Probabilities for Post Hoc Tests Error: Between MS = 15,930, df = 186,00

	Group	Payers 31.0	Non-borrowers 32.5	Debtors 28.0
1	Payers		0.073078	0.013301
2	Non-borrowers	0.073078		0.000059
3	Debtors	0.013301	0.000059	

Table 17. Unequal N HSD; variable Rational debt behaviour (Debt behaviour questionnaire) Approximate Probabilities for Post Hoc Tests Error: Between MS = 19,665, df = 186,00

	Group	Payers 32.0	Non-borrowers 32.0	Debtors 28.8
1	Payers		0.997753	0.021669
2	Non-borrowers	0.997753		0.019055
3	Debtors	0.021669	0.019055	

Table 18. Descriptive statistics for Locus of control

	Payers N=106		Non-borrowers N=52		Debtors N=27		All Grps N=185	
	M	SD	M	SD	M	SD	M	SD
General internality	4.7	1.8	4.8	1.9	4.4	1.5	4.7	1.8
Internality in achievement	5.8	2.1	5.4	2	5.7	1.6	5.7	2
Internality in failure	4.5	2.2	4.8	2	4	1.8	4.5	2.1
Internality in family relation	5.3	1.8	5.5	1.7	4.8	1.4	5.3	1.7
Int. in professional sphere	4.4	1.8	4.6	2	4.2	1.6	4.4	1.8
Int. in interpersonal relation	5.8	1.7	5.7	1.5	5.6	1.5	5.8	1.6
Internality in health	5.2	1.8	5.6	1.4	5.3	2.4	5.3	1.8

Analysis of Debt behavior questionnaire results

For each scale of Debt behavior questionnaire, the respondents can earn from 8 to 40 points. Non-borrowers and Borrowers/payers have average results on Internality in debt, below average results on Debt attitudes and above-average results on Debt avoidance and Rational debt behavior (see Table 13). Debtors have lower results on Debt avoidance and Rational debt behavior.

Normal distribution in all groups (K-S test) and homogeneity of variance (Leven's test) of dependent variables (scales of Debt behavior questionnaire) make it possible to use one-way ANOVA for debt behavior across the groups (Table 14).

The values of Table 14 confirm the fact that there is a significant difference in Debt behavior across groups. We continue our analysis (Table 15). The

whole model shows that groups differ significantly in Debt avoidance and Rational debt behavior.

Post Hoc analysis (Turkey honest significant difference HSD for unequal sample) presented in Table 16–17 shows that Debtors have a significantly lower level of Debt avoidance and Rational debt behavior than Non-borrowers and Borrowers/payers.

Non-borrowers do not differ significantly from Borrowers/payers neither in Debt avoidance nor in Rational debt behavior.

Results on Locus of control

The next part of our analysis was Locus of control. Descriptive statistics are presented in Table 18.

In all groups we observe similar results and a low level of internality. External locus of control is on General internality, Internality in failure and Pro-

Table 19. Multivariate Tests of Significance (Locus of control) Sigma-restricted parameterization Effective hypothesis decomposition

	Test	Value	F	Effect	Error	p
Intercept	Wilks	0.051981	458.5540	7	176	0.000000
Debtors-payers-non	Wilks	0.924815	1.0021	14	352	0.450508

fessional sphere. Moderate internal locus of control is on scales Internality in achievement, Family and Interpersonal relations and Health. High internal locus of control in any sphere is not fixed in our respondents.

One-way ANOVA for Locus of control across groups shows no significant differences (Table 19).

Results on Financial literacy

The final part was devoted to analysis of financial literacy. Results are presented in Table 20.

The vast majority of our respondent (more than 70%) in each group answered correctly on the first question. Less than a half of Debtors and Non-borrowers gave a correct answer to the second and the third questions, and half of Borrowers/payers managed to solve the third question. Less than a half of respondent in all groups completed task 1 and the lowest proportions is for Debtors group. More than 70% of Non-borrowers and Borrowers/payers (and less than 40% of Debtors) found a correct solution to task 2.

The highest mean number of correct answers in general is for Borrowers/payers, a smaller one — for Non-borrowers and Debtors have the lowest number.

Financial literacy is estimated by five questions (described in Methods), for which 1- is a correct answer, 0 — is a failure and the scale is the Number of correct answers.

One-way ANOVA was conducted to compare Financial literacy across groups: factor — variable Group, dependent variables — Qestion 1, Question 2, Number of correct answers (distribution is normal, homogeneity of variance in all groups). Results are presented in Table 21.

Our groups differ significantly in the level of financial literacy.

Results, presented in Table 22 show that there are differences in question 2 and in the general number of correct answers.

Post Hoc analysis showed that difference is between Debtors and Borrowers/payers.

DISCUSSION

The present study of respondents with different type of borrowing/debt behavior uncovered the following interesting features. Firstly, there is no significant difference in social and demographic characteristics of Borrowers/payers and Debtors. They tend to belong to the same age category, have the same marital and employment status. They take the same types of credits. Meanwhile, the group of Non-borrowers differ significantly from Borrowers/payers. They are younger, rarely married, have fewer children and these results are in agreement with those of Disney and Gathergood (2013) [17]. This group contains higher proportion of participants aged 18 to 25 years and we could expect them to have higher proportion of educational loans but turned out that this type of borrowing is not popular among Russians either because it is provided only by one financial institution (Sberbank) or due to the general attitude towards credit organizations. From sociological researches of Fayzullina A.I. (2007), Dikiy A.A. (2012) conducted on Russian sample we know that common users of credit organization are specialists from 36 to 50 years, working in public and private organizations. Negative attitudes to borrowing in general and credit organizations in particular connected with uncertainty in financial future, low level of trust to financial organizations and lack of knowledge of financial products [3, 6].

The most popular type of borrowing is consumer credit (73% of borrowing among payers and debtors), the next goes borrowing from relatives and friends (31%), then car loans, in some cases combined with consumer credit or borrowing from friends and relatives (22%), after that comes mortgage (17%), followed by a combination of mortgage with other types of borrowing (13%) and the last are credit cards (3%) and educational loans (1%). We can see that borrowing from relatives and friends (it is not the same as *p2p lending*) is rather popular among Russian respondents and this results are confirmed by Central Bank research [5]. A low level of Educa-

Table 20. Descriptive statistics for financial literacy scores

Group	Payers	Non-borrowers	Debtors	All Grps
N	131	89	31	251
Question 1	102 (78%)	72 (81%)	23 (74%)	197 (78%)
Question 2	78 (60%)	37 (42%)	14 (45%)	129 (51%)
Question 3	64 (49%)	31 (35%)	15 (48%)	110 (44%)
Task 1	59 (45%)	37 (42%)	9 (29%)	105 (42%)
Task 2	101 (77%)	62 (70%)	12 (39%)	175 (70%)
Correct answers M (SD)	3,1 (1,3)	2,7 (1,5)	2,4 (1,5)	2,9 (1,4)

Table 21. Multivariate Tests of Significance (Financial literacy) Sigma-restricted parameterization Effective hypothesis decomposition

	Test	Value	F	Effect	Error	p
Intercept	Wilks	0.224377	283.4565	3	246	0.000000
Group	Wilks	0.941314	2.5175	6	492	0.020745

Table 22. Test of SS Whole Model vs. SS Residual (Financial literacy)

	Mult	Mult	Adj	SS	df	MS	SS	df	MS	F	p
Quest. 1	0.05	0.00	-0.01	0.11	2	0.06	42.27	248	0.17	0.33	0.7160
Quest. 2	0.17	0.03	0.02	1.85	2	0.92	60.85	248	0.25	3.77	0.0245
Correct answers	0.19	0.03	0.03	17.18	2	8.59	474.36	248	1.91	4.49	0.0121

tional loan and high level of borrowing from relatives and friends can be considered as the remarkable traits of borrowing for Russian people.

From this part of our results we can conclude that the differences in debt behavior are caused mostly by personal characteristics and the level of financial literacy rather than by social and demographic characteristics of respondents. Economic conditions of households were not directly investigated but employment status can indirectly reflect them.

While there is no difference between Debtors and Borrowers/payers in their social and demographic characteristics they differ significantly in their psychological characteristics.

First of all, they differ in personality traits. Debtors have a significantly lower level of Conscientiousness than Non-borrowers and Borrowers/payers. No significant difference in Conscientiousness between Non-borrowers and Borrowers/payers was found. Thus, one can conclude that Debtors have a lower levels of thoughtfulness, as well as worse impulse control and goal-directed behaviors. They tend to

be disorganized and blind to details. They are more likely to break the rules, either because they don't like them or they forgot what they were. Our results are in agreement with those of Nyhus and Webley (2001) which suggest that conscientious individuals are less likely to have ever been in debt [34] and Brown, S. & Taylor, K. (2014) who proved that *conscientiousness* has inverse association with the probability of having credit card debt and negatively related to the amount of unsecured debt whilst other personality traits, where statistically significant, are positively related to the level of unsecured debt [11].

Besides, Caspi, A., Roberts, B. W., Shiner, R. L. (2005) stated that Conscientious individuals are responsible, attentive, careful, persistent, orderly, and planful; while those people who score low on this trait are irresponsible, unreliable, careless, and distractible. The authors said that Conscientiousness/Constraint includes at least six lower-order traits: self-control versus behavioral impulsivity, attention, achievement motivation, orderliness, responsibility, and conventionality [13]. Low level

of self-control was described as a trait associated with debt in the works of Gathergood (2012), Gathergood, J. & Weber J. (2014) [19, 20].

In our research conscientiousness is the only trait giving significant differences, but in literature we found other personal traits associated with debt behavior. Nyhus and Webley (2001) found that emotional instability (i.e. neuroticism) is a positive predictor of debt [34]. It was shown in Brown, Taylor (2014) that Extraversion has the largest association (statistically significant and positive) with debt in terms of magnitude [11, p. 204].

Moreover, Debtors have a significantly lower level of Debt avoidance and Rational debt behavior than Non-borrowers and Borrowers/payers. Non-borrowers do not differ significantly from Borrowers/payers neither in Debt avoidance nor in Rational debt behavior. According to Debt behavior questionnaire, high Debt avoidance can be understood as an ability to organize one's own life in such a way as to enable a person not to borrow. For example, such people prefer to restrain from a purchase or delay it if they do not have enough money just now or they will try hard to save money to buy something expensive in the future. They plan their budget and avoid borrowing. Low debt avoidance is expressed in the beliefs that credits make our life better, they let people organize their spending. In our understanding, low Debt avoidance is close to tolerant attitudes towards debt which is associated with high debt in Davies, E., Lea, S. E. G. (1995) [14].

People who scored high on Rational debt behavior analyze the credit market, calculate total cost of the credits and choose the optimal variant before engaging in a credit deal. They understand when and how they will pay their debt back. Low Rational debt behavior can be interpreted as following: sometimes such people borrow without understanding when and how they will pay it back. If they like something they will buy it even they cannot afford it. They are not ready to spend much time on the analysis of credit market, fiddling with documents and waiting long for credit decision. In other words, they make impulsive decisions. It was shown in Gathergood, J. (2012) that lack of self-control and financial illiteracy are positively associated with non-payment of consumer credit and self-reported excessive financial burdens of debt. Consumers who exhibit self-control problems are shown to make greater use of quick-access but high cost credit items such as store cards and payday loans [20].

One-way ANOVA for Locus of control across groups shows no significant differences. But the works of Dessart & Kuylen (1986) and Levingstone & Lunt (1992) gave some evidence that debt is associated with external locus of control [16; 29], while research conducted by in Lea, S. E. G., Webley, P., Walker, C.M. (1995) found no significant difference in locus of control [28].

Finally, our groups differ significantly in the level of financial literacy but the difference is observed only between Non-borrowers and Borrowers/payers. In other words, we can say that Borrowers are more competent but we cannot state the cause-effect relationships. They might be more financially literate because of practical experience — they have to borrow and have to learn about credits; or they might as well have been initially more financially educated, and that encouraged them to participate in the financial market more actively. Research papers by Brown, M., Grigsby, J., van der Klaauw, W., Wen, J. & Zafar, B. (2014) show that economic education leads to an increase in debt market participation [10]. In our research no evidence were found to prove that Debtors are less financially literate, as they were in Gathergood, J. (2012) and Gathergood, J. & Weber J. (2014) [19, 20].

CONCLUSION

In this paper we have analyzed the relationship between social-demographic, psychological characteristics, level of financial literacy and borrowing and debt behavior of Russian people. We predicted that differences between non-borrowers, borrowers fulfilling their obligations in full, and debtors come in three flavors: firstly, the willingness to borrow money and tolerance for the presence of loan; secondly, theoretical understanding of what a loan is and how it is to be paid, as well as the ability to match the available resources with one's needs (financial and debt literacy); and, thirdly, there are certain psychological characteristics — such as emotional stability, awareness, responsibility and internality — which enable borrowers to take action to repay the loan.

Our findings suggest that some psychological characteristics are statistically significantly associated with debts. Debtors have a lower level of conscientiousness, debt avoidance and rational debt behavior than borrowers/payers and non-borrowers. All these characteristics are about responsible, at-

tentive, careful, planful behavior in financial sphere and the ability to control impulses. Conversely, our findings suggest that there is no significant difference in social and demographic characteristics, type of borrowing, financial literacy and locus of control between borrowers/payers and debtors.

We have the opposite results for group of non-borrowers: they differ from borrowers/payers in social and demographic characteristics but not in psychological characteristics. Our research cannot answer the question whether they do not participate on credit market because of strong beliefs against it

or just because they are younger than other groups and have not had such possibility yet.

Overall, our hypothesis about the differences in debt behavior is proved in the part connected with willingness to borrow, tolerance for the presence of the loan and in the part about personality traits such responsibility and organized financial behavior. No differences were found in financial literacy between debtors and other groups but they differ in rationality of debt behavior. We can conclude that our empirical analysis confirms the role of psychological characteristics in debt behavior.

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Gold, Dollar, International Trade and Monetary Integration in Us Foreign Policy: from the Interwar Years Through the Height of Bretton Woods

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Abstract. This contribution aims at charting the topicality of gold in the shaping of US foreign financial and commercial relations from the Great Slump (Great Depression 1929–1939) through to the US balance of payments in the second half of the 1950s up to the eve of the international gold crisis of 1968. Through an analysis of the US foreign economic policy, the paper dissects this interrelation between US foreign trade and gold policy. Unlike the interwar years, the post-war decades from the 1950s to the 1960s were marked by a negative correlation between transnational gold movements, the US balance of payments deficit, the teetering of the US currency in international exchange markets, and international trade and monetary integration.

Keywords: gold policy; international trade; international monetary integration; US foreign economic policy; gold flows.

Золото, доллар, международная торговля и валютная интеграция во внешней политике США: от послевоенных лет через Бреттон-Вудское соглашение

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Аннотация. Статья ставит своей целью характеристику роли золота в формировании американских внешних финансовых и торговых отношений, начиная с Большой Депрессии, через платежный баланс США во второй половине 1950-х гг., вплоть до международного кризиса золота в 1968 г. Посредством анализа внешнеэкономической политики США статья раскрывает взаимосвязь между внешней торговлей США и политикой в области золота. В отличие от предвоенных лет, послевоенные десятилетия с начала 1950-х до конца 1960-х гг. были отмечены отрицательной корреляционной связью между транснациональным движением золота, дефицитом платежного баланса США, колебаниями американской валюты на международных валютных рынках и международной торговлей и валютной интеграцией.

Ключевые слова: доллар; международная торговля; международная валютная интеграция; внешняя политика США; движение золота.

INTRODUCTION

This contribution aims at charting the topicality of gold in the shaping of US foreign financial and commercial relations from the Great Slump through to the US balance of payments in the second half of the 1950s through to the eve of the gold crisis of 1968 and the general wobbling of the fixed but adjustable international monetary system established at the 1944 Bretton Woods conference and based on the US dollar's convertibility into gold.

After a first section on the gold policies from the Roosevelt administration to the Second World War years, this contribution explores the increase of transnational gold movements in the post-WWII international economy and its linkage to the recasting of international trade. The third section examines the relevance of measures designed to resurrect the US balance of payments and the dollar through measures focused on the current account position such as the reshaping of US foreign military assistance programs during the early 1960s, and measures designed to recast the capital account later on.

Through the perspective of the US foreign monetary and financial policy, the aim is at exploring the linkage between the role of gold not only in stabilizing or weakening the international monetary system, but also as the backbone to prop up the competitive edge of US manufacturing in foreign trade. The focal point is to explore the interconnectedness that linked the gold flows between the US and its partners western industrial economies and gold producers, the stability of the dollar in foreign exchange markets and the changing competitive edge of US manufacturing in US foreign economic policy during those decades. This contribution suggests that under the Bretton Woods system the US established a linkage between Washington's foreign monetary and trade policies. Against this backdrop, the US commitment to strengthen its balance of payments' stability and the dollar's strength in foreign exchange markets was always based on American measures and policies to stabilize gold reserves and transnational gold flows. In other words, throughout the period the interrelation between the dollar's convertibility into gold and international confidence in the US currency was a prerequisite to establish and to implement a sound and growing international trade and payments system. A balanced ratio between gold and dollars on reserve in Washington was considered a vital means of sustaining the competitive edge of

US manufacturing in foreign markets. In so far as the scale and scope of US foreign trade balance and international payments position was the linchpin for an expanding international trade and payments system, keeping under control gold on reserves and transnational flows in gold was an irreplaceable prerequisite to an ever-increasingly integrated international economy. Through an analysis of gold policy and the foreign economic policies of the US administrations and Washington's monetary authorities during the time frame considered, the paper suggests that the US economic and monetary policymakers were fully aware of this close interconnection since Washington's foreign monetary might and balance of payments equilibrium came under the strains. Likewise, and particularly since the dollar began teetering in foreign markets and the US balance of payments run into deficit, Washington embarked upon a policy based on linking commercial bonds to its foreign financial and monetary policies. Through an analysis of the US foreign economic policy, the paper dissects this interrelation between US foreign trade and gold policy. After a first section on the gold policies from the Roosevelt administration to the second world war years, this contribution explores the increase of transnational gold movements in the post-WWII international economy and its linkage to the recasting of international trade. The third section examines the relevance of measures designed to resurrect the US balance of payments and the dollar through measures focused on the current account position such as the reshaping of US foreign military assistance programs during the early 1960s. Since the Kennedy years two long-standing issues and the policies devised in Washington to cope with them were clearly at stake. In first instance, it is worth pointing attention to the sticky effects of capital outflows from the US and declining foreign investments in the country. This two-fold process that triggered an increase in the share of dollar denominated assets in world capital supply and had substantial repercussions on the dollar's rate and US competitive position in world markets. Since this time the US paid attention to growing capital outflows and their effects on the foreign run on US gold reserves, a long-standing issue to Washington all over the 1960s. However, by and large during the first half of the decade the US monetary authorities focused attention on the current account position of Washington's balance of payments. The US worked on resurrecting the trade balance through a number

of foreign trade policies, first and foremost foreign military assistance. It was only since the mid-1960s that the US administration and monetary authorities concentrated on the capital account position as the cornerstone to resurrect the balance of payments, to prop up the dollar in foreign markets, and to stem the run on US gold reserves. Secondly, the relevance of Washington's trade surplus, and the US efforts to devise measures to improve it further as a means of pursuing the stabilization of US balance of payments and the return of dollar-denominated financial assets to the United States. This attention to foreign trade, that dates back to the Roosevelt administration, sheds light on a US foreign monetary and gold policies based on combining restored balance of payments equilibrium with expanding international trade integration. By expanding exports and reducing imports as a means of reducing the dollar glut in the international economy, over the first half of the 1960s Washington strove to contrast the international run on US gold stocks that fundamentally contributed to weakening the US currency and its convertibility into gold well before its suspension by the Nixon administration. Since as early as this time, the US authorities devised a set of policies aimed at reducing overseas expenditures and increasing export to dollar-holding countries and other commercial partners which held other hard currencies financial assets or were rich in gold reserves. The combined reduction of federal foreign aid, the involvement of western allies in funding multilateral development assistance policies, and the promotion of export credit measures under the aegis of the Export-Import Bank of the United States, took place against this foreign financial and trade policy backdrop. This contribution focuses only on the From the mid-1960s through the turn-of-the-decade deterioration of Bretton Woods the US turned to focus attention only on the reshaping of foreign military assistance and early repayments of outstanding debts owed to the US as a means of reducing the dollar glut and the run on US gold stocks. the capital account position and capital outflows. In light of continued US balance of payments deficit and strained US gold reserves, from the mid-1960s to the end of the decade the Johnson administration shifted its attention to the capital account position. Certainly, the accumulation of dollar denominated private assets held by overseas branches of American banks and corporations as a result of their foreign investments and capital flight, as well as the accumu-

lation of dollars by gold producers and dollar-holding western countries is crucial to understand such turning in the US foreign financial and monetary policy. The expansion in the share of dollar assets in total world supply that featured the decade was certainly the financial component that lies at the interconnection between the decline of dollar's convertibility into gold, the weakening of the dollar, and the plummeting competitive position of US goods and services in world trade. Over the decade of the 1960s this interrelation entailed a reduction in the scale and scope of world trade integration and flows of goods, which since the postwar decade up to that decade had exceeded transnational capital supply for fixed capital formation¹. Therefore, does the paper argue, it can be established a linkage between the instability in US gold reserves, expansion in transnational gold transactions and flows, and reduced international exchange in goods and services based on a decline in the US manufacturing competitive position in world markets.

1. FROM THE INTERWAR YEARS TO WWII: US GOLD POLICY AND INTERNATIONAL MARKET INTEGRATION

Until after Roosevelt came to the White House, for over a decade after the end of WWI the US administrations had reacted to transnational gold flows by means of raising the discount rate to preserve their reserve positions². Such approach, which had stiff contractionary effects on the business cycle, helps to better understand that until the early 1930s the US authorities established and favored a negative correlation between transnational gold flows, and trade and payments integration. In order to curb gold flows and to protect exchange rates they reduced money supply and triggered a reduced volumes of exchanges in goods and flows in capital³.

In the wake of this long-standing approach, as widely-accepted in the economic as in the historical literature, amid the unprecedented economic downturn that from 1928 through the beginning of the new decade ravaged both the American bank-

¹ United Nations, *Yearbook*; UNCTAD, *Handbook of International Trade and Development*; OECD, *International Direct Investment*; United Nations, *Transnational Corporations*.

² Charles W. Calomiris and David C. Wheelock, (1998), "Was the Great Depression a Watershed for American Monetary Policy?", in Bordo, Goldin and White, *The Defining Moment*, p. 29.

³ The literature on the Federal Reserve System's monetary strictness is too vast to summarize here. See for reference.

ing system and US manufacturing, the US Federal Reserve System bore responsibility for not serving as the lender of last resort to recast the supply side and to foster fixed capital formation. In that framework, the newly appointed Roosevelt administration undertook a monetary policy that for the first time since the outset of the postwar international monetary regime brought gold to center stage. Through a series of repeated gold purchases on foreign markets, particularly on the Paris and London markets in 1933, and a nominal revaluation of gold at \$35 an ounce, the new administration marked a breakthrough in the history of its gold policy. Through the passing of the Gold Reserve Act the new administration created a fund, the so called Exchange Stabilization Fund, specifically aimed at dealing in gold and financing foreign exchange operations⁴. While the revaluation of gold was intended to stabilize the dollar's exchange rate, the proceeds on sales of gold after revaluation accrued to the ESF. Such proceeds were worth financing foreign exchange operations, investment-related import requirements and export credit operations carried over in connection with New Deal domestic investments. In so doing, not only did the Roosevelt administration stimulate domestic investments and foreign exchange operations without remarkable inflationary strains. It also set conditions to use gold as a means of payments and as such as an instrument to stabilize the dollar and the US international payments position as a prerequisite to bolster international trade integration. Such gold purchases conducted during 1933 were first intended to run counter to the Bank of England commitment to depress the value of gold in international markets. In recalling them, President Roosevelt himself established a linkage between the effects of such purchases, the effects of gold revaluation on the dollar's exchange rate, which led to bring down its rate against the pound, and the positive impact that such exchange rate measures attained through Washington's gold policies had on the US international trade and payment positions. After a long lasting trade surplus, did the president claim before the press, due to his administration's gold purchases policy the US had reduced its trade surplus in many manufacturing sectors as cotton, wheat, copper, and many more, thus reducing the overhang of trade surplus on the domestic economy

⁴ *Introducing the Exchange Stabilization Fund 1934–1961*, in Bordo, Owen and Humpage, *Strained Relations*, pp. 58–59.

and propping up domestic prices⁵. Therefore, we see how early in the century Washington associated the value of gold and gold reserves with the US international payments position and expansion of Washington's foreign trade.

During WWII gold came even more to center stage in US policy toward the belligerent countries in the framework of the debate on restitution policies. In discussing various forms of reparations on Germany and other belligerent countries, the Department of State reckoned the difficulty of imposing on Germany cash reparations in so far as this form of repayments depended on the country's readiness to import from abroad. In trying to by pass this deadlock, US diplomats suggested to make reparation revolve around metallic reparations: unlike other products and material, gold was considered an ideal means of replacing other property losses by a country. Besides, and more importantly from the view point of this contribution, the stock of monetary gold found by the Allied authorities in Germany should be prorated in proportion to gold losses among the Allied countries whose gold stocks had been looted⁶. From Fall 1944 to the end of the conflict this concept was extensively debated in Washington. This debate suggests a widely-shared and increasingly influential concept of gold as both a means of payments and a reserve unit in either the United States or the other western economies that were transiting from hostilities to the adherence to the Bretton Woods monetary system. Since war time the Department of State made the argument that in no case a country that had suffered from gold losses should be entitled to receive gold in excess of its losses. From Fall 1944 to the Paris Restitution agreements of 1946⁷ the Unites

⁵ 88th Press Conference at the Executive Offices of the White House, January 15, 1934, in Franklin Delano Roosevelt Library and Museum, Hyde Park, NY (henceforth FDRL), Papers as President, President's Personal File 1933–1945, Press Conferences 1933–1945. On Roosevelt's concern about gold outflows and the effects of downward domestic prices and a reduced volume of foreign trade exchanges on the American economy see also the US President, Radio Address of the President, 7 May 1933, in FDRL, Papers as President, President's Personal File 1933–1945, Speeches of President Franklin Delano Roosevelt.

⁶ Department of State, Report on Reparations, Restitution and Property Rights in Germany, July 31, 1944, in FDRL, Morghentau diaries, Diary Book 777, September 29–30, 1944.

⁷ The US Embassy in Bruxelles to the Department of State, 'TGC-Return of Gold Bars', 18 April 1988, in National Archives and Records Administration, College Park, MD (henceforth NARA), Records of the Central Intelligence Agency (henceforth RG263), Second Release of Subject Files Under the Nazi War Crimes and Japanese Imperial Governments Disclosure Acts, Tripartite Gold Commission. See also Teitelbaum and Sanbar, *Holocaust Gold*.

States showed their palpable aim at establishing a linkage between international restitution policies and the pressing postwar need to make gold not only a means of payments but also a reserve assets to recast international trade and monetary integration in a foreseeable future. The US policy on the Allied restitution Commission cast light on this US international monetary policy goal. Based on the US proposal to the Commission in late 1945, a gold pool policy would be adopted. According to it, a gold pool of countries would be established in order to collect and distribute all monetary gold found in Germany by the allied or transferred by the Germans to occupied countries. The reparation principle that underpinned the restitution policy proposed by the US and agreed upon by the French and the British revolved around monetary gold instead of gold⁸. Therefore, the incumbent Truman administration envisioned restitution policy as the groundwork for the postwar international monetary system based on gold as both means of payments and a reserve units for international payments according to the inter-convertibility between gold and dollar.

II. THE USA, TRANSNATIONAL GOLD MOVEMENTS AND INTERNATIONAL MARKET INTEGRATION IN THE POSTWAR ERA

The interrelation between transnational gold flows, the stabilization of the US currency in foreign exchange markets, the US international payments position and the stabilization of international trade and payments at large, that lies at the origins of the Roosevelt administration's foreign monetary policy just charted, developed further quite shortly after the end of WWII. At the same time, however, it began a long-lasting run on gold in international markets that set the historical antecedents to developments chronicled throughout the 1960s. It first took place as an increase in international exchanges in gold both within and outside of the fixed exchange rates system and its member countries. Thereafter, international gold movements paved way for a deliberate run on US gold stocks. These developments soon jeopardized

the American project of making gold a bulwark for international monetary and trade integration. The first stage stretched out from the post WWII reconstruction of the international monetary system through to the 1950s. The latter one was typical of the Bretton Woods system during the 1960s more closely explored in the last section. The dreadful byproduct of this process was an excess in gold reserves at western central banks and a corresponding excess in dollar liquidity in international exchange markets⁹. This tendency laid the groundwork for both a seamless instability of the dollar's convertibility into gold and for the unfettered weakening of the US currency in international markets. Such two-fold developments fundamentally contributed to undermine the international trade and payments system laid down at the Bretton Woods conference. In turn, it sheds light on the sequential linkage between transnational gold movements, the crisis of the dollar and the US international payments position, and the process of international financial and market integration. Such linkage accounts for a fundamental shift in the ratio of transnational capital supply to transnational flows in commodities and consumer goods. Based on available statistical estimates, prior to the 1960s in monetary values the flows in commodities outpaced capital flows, whereas later on, in the framework of declining US gold reserves and reduced international confidence in the American currency, international financial transactions led demand and flows in consumer goods¹⁰. This shift helps chart the impact of increased international gold movements, declining stability of the US dollar in exchange markets and the US balance of payments deficit, on international trade integration. In other words, this sequence of events in international monetary relations destabilized and jeopardized the making of a highly-integrated and stable international trade and payments system. The two-step process that caused an increase in transnational gold movements deserve to be analyses separately. This paragraph briefly charts the increase in transnational gold transactions, whereas the next one focuses on the run on US gold stocks during the 1960s in

⁸ *US and Allied Efforts to Recover and Restore Gold and Other Assets Stolen or Hidden by Germany During World War II. Preliminary Study*, Coordinated by Stuart E. Eizenstat (Under Secretary of Commerce for International Trade, Special Envoy of the Department of State on Property Restitution in Central and Eastern Europe), May 1997, pp. 56–57.

⁹ US Department of Treasury, 'US Short Term Liabilities to Foreigners', January 1968, in Declassified Documents and Reference System (henceforth DDRS); The Chase Manhattan Corporation, *Euro-dollar Financing. A Guide for Multinational Companies*.

¹⁰ See footnote 1.

the framework of American policies to restore US external balance on either the current or the capital account position.

We have seen the relevance of gold in wartime restitution policies and gold settlement policies. In setting up the post war international financial and trade system, the US government established a clear linkage between the reorganization of stable gold reserves and the primary policy target of tearing down trade barriers and instituting a highly integrated international economic system. The establishment of the IBRD and the IMF clearly helps track this interconnection: in either case the US and other member countries of the two international economic institutions were called on contributing a portion of their balances in gold. Since its inception, the Bretton Woods system envisaged using gold to prevent the economies that adhered to it from retrenching into trade restrictions and exchange controls in case of balance of payments disequilibria and other external imbalances. To put it another way, gold was a vital asset to promote stable exchange in goods and capital. Moreover, stable gold reserves were considered a prerequisite to attain a country's full participation to the international trade system. In this respect, the case of the 1945 financial agreements reached by the UK and the US is a noteworthy. Tellingly, the December agreements signed by the two countries created a line of credit to London specifically aimed not only at preventing the UK from reducing its purchases of US products and consumer goods, but also at helping the country maintain its gold and dollar reserves, the one being the basis to create liquidity for investments or for international trade financing, the other one considered vital to finance foreign exchange market operations¹¹. However, since wartime, the United Kingdom had begun selling gold to a number of developing countries, particularly India, in order to finance its military expenses in local currencies. In 1943, at the invitation of the UK, Washington joined London in this practice to finance its military operations in India. Thereafter, the US government expanded this program and start selling gold to a number of countries, from Egypt to Iran, in order to finance its overseas military expenditures. In short, Washington considered gold an irreplaceable form of reserve to back international exchanges in capital and goods but its postwar role in interna-

tional relations led the United States to draw on its reserves and to jeopardize the balance between gold and dollars since the outset of the international monetary system based on their inter-convertibility. This use of gold in support of US foreign policy was the epicenter of a much more systematic use of gold in international economic relations that over the postwar era increased international gold flows. Along the way a number of events and practices in postwar international payments added to this use of gold to finance Washington's foreign policy. They contributed to such expansion in gold transactions and to jeopardize the balance between gold and dollars, and between the quantity of gold held on reserves and that used for international transactions.

As a matter of fact, certainly the crucial issue that altered a balance between gold and dollars, set the context in which over time the dollar got weaken in exchange markets, the US international payments position deteriorated, the competitive position of US manufacturing tottered, and jeopardized international trade and payments, was America's overseas military and financial commitment associated with the financing of the Marshall Plan and the Atlantic Alliance under the Bretton Woods fixed exchange rate system. The US effort to reduce the dollar gap in Western Europe and to promote intra-European trade through Marshall Plan aid and coordinated rearmament programs reduced European dependence on US manufacturing, increased the dollar component of Western European central banks reserves, and account for the substantial increase in the gold component of European reserves from the late 1940s to the new decade. From 1950 to 1957 the OEEC countries increased their reserves by \$6.5 billion: this increase consisted in equal part by increases in gold and foreign exchanges, particularly dollar reserves¹². The attainment of intra-European market integration and the process that led to full currency convertibility increased European dollar holdings and the correspondent European purchases of gold from the US and some major gold producers. Therefore, apparently at this stage there was a positive correlation between transnational gold movements and international monetary and trade integration. In fact, the recasting of Intra-European trade and the attainment of full currency convertibility was coupled with increased transnational gold transactions. However, a set of multiple dynamics added to

¹¹ US Department of the Treasury, *Annual Report of the Secretary of the Treasury on the State of the Finances for the Fiscal Year Ended June 30, 1945*, pp. 9–10.

¹² Walter, *World Power and World Money*, pp. 163–64.

this development and set conditions that stretched the recently established gold-dollar standard to the limits in the following decade.

As a matter of fact, the postwar international monetary system proved to be extremely fragile and gold movements across nations increased for a number of reasons that transcended US foreign defense and assistance policy. It is worth charting them briefly before exploring the dynamics of US gold and balance of payments policies during the crucial decade of the 1960s. In first instance, prior to the attainment of full currency convertibility, many key currencies run into the risk of devaluation, which indeed occurred for all major European currencies over the period from 1948 to 1949. Before such wide-spread devaluations, in these currency areas a number of fundamentally hedge-induced hoardings did occur as a preventive move. This was mostly the case of France in 1948: the country, which at the time was to transfer gold reserves valued at 415 million sterling to Great Britain in settlements of commercial balances¹³, in 1948 was expecting a devaluation of the French franc. Such expectation caused a surge in the international demand for gold and French gold hoarding¹⁴, a move reiterated by France in light of a further risk of currency devaluation a few years later, in 1953¹⁵.

Secondly, over the postwar years gold movements increased as part of the intra-European trade liberalization schemes and the payments settlements mechanism associated with it. Since as early as 1949 the OEEC payments plan to finance European trade integration had caused a drain on British gold and dollars¹⁶. Thereafter, the European Payments Union (EPU), the clearing house established in 1950 to settle payments and financial transactions in connection with the process of continent-wide trade liberalization, entailed that EPU member creditors could be partly rewarded by debtors in gold. This mechanism was so much so harmful to the stability of gold in world markets and to the gold-dollar standard that in 1953 a proposal brought before the Ministerial Council of the OEEC by the creditor countries, es-

entially Germany and Holland, to receive a larger proportion of gold to credit granted, was cast aside by the Council¹⁷.

In third instance, gold was widely and recurrently used to back international trade in other commodities and food. This was much the case of Eastern European and Soviet gold purchases over the post-WWII era. At the beginning of the 1950s Soviet gold production, which was estimated at 2 billion ounces per year, was used to finance the import requirements of food, raw material and essential investment goods of its satellites Eastern countries¹⁸. In so doing, Soviet gold policy and the Eastern bloc foreign trade policies were fundamentally interlocked one's another. In turn, the Soviet Satellites themselves resorted to their gold production to stimulate their international trade transactions. For instance, at year-end 1947 the Rumanian government transferred twenty-one thousand kilos of gold it held to the Swiss National Bank to guarantee the payment for food supplies from the Argentine Government¹⁹.

A fourth dynamic that enhanced transnational gold transactions and helps chart the linkage between gold movement and international trade integration was a premium price steadily above the official gold price. On the eve of the 1950s this led both central banks such as the Banque de France and some private banks such as Mexican commercial banks to purchase gold in the US at the official price of \$35 an ounce to resell it onto the legitimate open market or to black market dealers at the premium rate of \$42 or \$45²⁰.

III. FROM GOLD MOVEMENTS TO THE RUN ON US GOLD STOCKS: US GOLD POLICIES AND THE CRISIS OF BRETTON WOODS INTERNATIONAL TRADE AND PAYMENTS INTEGRATION IN THE 1960S

This jumble of overlapping trends that increased gold movements and began -as early as the 1950s-

¹³ CIA Economic Intelligence Group, "French Concerns Regarding Soviet Gold Policy", 29 July 1947, in CIA E-Reading room, <https://www.cia.gov/library/readingroom/home>.

¹⁴ Eugene Dickhuth. British Resume Export Permits for Gold Sheets as Demand Rises, *New York Herald Tribune*, February 1, 1948.

¹⁵ Lombard. Depression in Gold Markets, *The Financial Times*, 15 May 1953.

¹⁶ Sydney Gruson. Drain on Gold Continues, *The New York Times*, 28 June 1949.

¹⁷ EPU Debtors' Gold Liabilities. UK Opposes Move for Bigger Payments, *The Financial Times*, 31 October 1953.

¹⁸ CIA, Economic Intelligence Information Report. "Soviet Gold Production and International Gold Markets", 20 April 1951, in CIA E-Reading room, <https://www.cia.gov/library/readingroom/home>.

¹⁹ CIA Intelligence Report. "Shipment of Gold to Switzerland", 23 December 1947, in CIA E-reading room, <https://www.cia.gov/library/readingroom/home>.

²⁰ CIA Economic Information Report. "Soviet Gold Production and International Gold Markets", 20 April 1951, in CIA E-reading room, <https://www.cia.gov/library/readingroom/home>.

to put pressure on the gold-dollar parity, lies at the origins of the weakening of gold in world markets and set conditions for the following decade instability in the US international payments position on which world trade and currency integration revolved around. As a result of this postwar multiple gold movements across nations, by as early as 1953 the world free gold markets was depressed and the decline in the value of gold in it led to repeated speculation about an agreed Anglo-American raise in the official price of gold. Over the following decade such potential uptick was repeatedly entailed as a mighty solution to increasing pressure on the inter-convertibility between dollar and gold and the stability of international trade and payments²¹. Making matters worse, over the course of the 1950s such early pressures on the value of gold in world markets intersected with the crisis of the US international payments position and the ensuing two recessions that ravaged the US economy at the end of the decade. Since 1950 the US balance of payments run into deficit averaging \$1.5 billion from 1950 to 1956. During the same period, from 1950 to 1957, the US Treasury lost \$1.7 billion in gold reserves. This deterioration accelerated in 1958: that year Washington's gold reserves lost \$3.4 billion²² in the framework of a plummeting balance of payments deficit from 1958 to 1960²³. These losses in US gold stock caused a decline in the US dollar equivalent price for bar gold on all major European gold markets that developed since as early as 1960. Such development hit the stability of the US dollar up to the eve of Nixon's decision to suspend the convertibility of the dollar into gold. During this year the dollar price of gold bars in London, Paris and Zurich, which was the benchmark to measure the value of the US dollar against gold, increased²⁴. Interestingly, this major gold crisis did occur even as the country was muddling through the hardest recession and balance of payments crisis to date. The 1957 and 1959 US economic downturn were a

mixture of declining competitive edge in foreign markets for US manufacturing, plummeting balance of payments equilibrium, and stiff domestic economic downturn. Unlike during the postwar era, such combined outflow of gold from the US and balance of payments deterioration cast aside any previous positive correlation between transnational gold movements and international trade and market integration. Tellingly, in the framework of this gold outflow and tottering balance of payments, the US manufacturing, and specifically the mature sectors that depended the most on foreign exchange policy, reduced profits and competitiveness and lost ground in foreign markets²⁵. From 1957 to 1958 the corporate profits of US manufacturing dropped²⁶, whereas from 1958 to 1973 production workers of US manufacturing experienced a constant decline²⁷. In light of either crises the US authorities adopted a tight monetary policy to recast the business cycle by preventing capital outflows and stimulating the reflow of capital from abroad.

On the eve of Kennedy's coming to the White House, it was a widely held view in Washington that the US balance of payments deficit and losses in US gold stocks should be led back to capital flight and to the capital account position. In their briefs for Democratic candidate to the White House John Kennedy prior to his meeting with president Eisenhower, Kennedy's advisers pointed attention to the contribution of American foreign investors to the rising US balance of payments deficit. They stressed that US investors be blamable for short-term capital outflows from the United States recorded over the last few years²⁸. Mostly owed to the US overseas investors, including corporations and banking, such short-term capital outflows uttered in an increase in dollar denominated assets in world money supply that hit the value of the US currency

²¹ Lombard, Depression in the Gold Markets, *The Financial Times*, 15 May 1953.

²² Walter, *World Power and World Money*, p. 153.

²³ Data on the US balance of payments deficit are drawn from Federal Reserve Bank of St. Louis, *Monthly Review*, vol. 43, n. 3 (March 1961), p. 4.

²⁴ International Monetary Fund Archive, Washington DC (henceforth IMFA), Executive Board Documents, Departmental Memoranda, 1960-Departmental Memoranda, IMF Office of the Treasurer. "Monthly Reports of Gold Prices in Various World Markets (IM/60/16)", 12 May 1960.

²⁵ Department of Commerce, Bureau of the Census, 1975, Part 2, Chapter P: Manufactures, pp. 652 ff.

²⁶ Department of Commerce, Office of Business Economics, 1958, p. 203.

²⁷ NBER, seasonally adjusted US Index of Production Worker Man hour in Manufacturing 01/1932-10/1962, in NBER MACROHISTORY: VIII. Income and Employment, retrievable at <http://www.nber.org/databases/macroeconomic/contents/chapter08.html>.

²⁸ John F. Kennedy Presidential Library and Museum, Boston, Mass. (henceforth JFKPL), Papers of John F. Kennedy. Presidential Papers, President's Office Files, Special Correspondence. Eisenhower March-December 1960, John Sharon and George Ball, "Briefing Memoranda for Meeting with President Eisenhower", December 6, 1960'.

in foreign exchange markets and the US balance of payments. By the end of 1962 the US balance of payments deficits run roughly at \$2 billion²⁹. The outflow of liquidity and dollar-denominated financial assets contributed to trigger the outflow of gold, which in turn further undermined the fixed dollar value of gold, the value of the dollar in foreign exchange markets and international monetary stability. The stability of the US currency was necessary for smoothly developing international trade and payments based on fixed but adjustable exchange rates. Three factors contributed the most to trigger such chain of unstoppable outflows that lays at the origins of the long-term deterioration in both the Bretton Woods fixed exchange rates, and the competitive position of US manufacturing firms during the 1960s³⁰. In first instance, as soon as 1958 currency convertibility went fully into effect, most exchange controls were lifted. In the framework of Europe's postwar economic recovery, in late 1958 most European countries moved to let foreign holders of financial assets denominated in the legal tender freely convert them into dollars or other currencies. The aim was to stimulate trade in goods and merchandise in international markets³¹. This decision triggered a steady and meteoric expansion of dollar denominated financial assets held by foreign residents outside the United States. In less than 3 calendar years, from December 1958 to September 1961, the estimated gold reserves and dollar holdings of western European countries not including the UK increased from roughly a little over \$17 million to a little over \$23 million³². One year later, official and private short-term dollar assets held by foreign residents with banks in the United States were about \$19.6 billion³³. In second instance, US foreign military spending and the federal government's overseas expenditures became a cumbersome load on the US current account deficit: as the Department of State pinned it, US overseas military expenditures

financed dollar holdings by foreigners. US diplomats stressed that these dollar holdings were increasingly spent to purchase gold in the US gold markets³⁴. Other and more general developments that took place in international gold markets from the very late 1950s through the early 1960s added further strain to the teetering inter convertibility between the US currency and gold, in particular the USSR gold purchase policy in international markets to finance its current account deficit. Over the following years, this European purchases of gold in the US, along with such other gold movements, contributed further to the worsening value of the US dollar in international exchange markets³⁵. However, massive European drain on US gold would also reduce the scale of international trade and market integration. Certainly, the Kennedy administration showed a palpable concern about the impact of an ever-expanding international gold market on international trade and payments as long as it was in office. The US administration placed attention on the impact of large gold buying on European purchases of US consumer goods, merchandises and services. To put it another way, gold buying would reduce international liquidity and lessen European imports from the US consumer goods producing market³⁶. Therefore, the US authorities established a correlation between the increase in the value of gold and the decline in US export to the western European markets.

In this framework, under the Kennedy administration the US search for balance of payments stability was mostly focused on the current account position and revolved around the reshaping of foreign trade. Since he briefed the US Congress about the pivotal importance of foreign trade to US foreign economic relations as early as February 1961, president Kennedy showed his inclination to focus attention on the current account position to restore balance of payments equilibrium. Accordingly, during the first half of the 1960s Washington prompted its western European partners to pre-repayments of outstanding debt and increase overseas military

²⁹ Department of Commerce, 1963, pp. 17–20.

³⁰ From the period 1957–60 to the period 1961–64 the value added in percentage of total manufacturing of the low capital intensive industry that depended the most on foreign exchange adjustments declined from 1957 to 1960 and came further down from 1960 to 1964, whereas the highest capital intensive American sectors that traditionally depended the least on foreign monetary arrangements increased. See Department of Commerce, Bureau of the Census, 1966, Part III, table 5, p. 84.

³¹ Silberman, 1962, p. 3. For a detailed account of this turn see Department of the Treasury, 1960, pp. 52–53.

³² US government, 1962, table B-80.

³³ Department of the Treasury, 1963, p. 80.

³⁴ JFKPL, Papers of John F. Kennedy, Presidential Papers, National Security Files (henceforth NSF), Country File: Italy General, 5/11/1962–5/20/1962, b. 120, George Ball, State-Defense-Treasury Message, May 11, 1962.

³⁵ Board of Governors of the Federal Reserve System, 1976, table 15.23, pp. 1032–33.

³⁶ Memorandum for the Record. "U.S. Balance of Payments Deficit and International Gold Flows", June 10, 1963. In CIA E-reading room <https://www.cia.gov/library/readingroom>.

sales while setting plans for staggeringly reducing foreign military expenditures. This in order to reduce dollar holding by foreign governments and the ensuing run on US gold stocks³⁷. At the same time the new administration and the Federal Reserve System paid an unfinished attention to capital account transactions by taking a series of measures to counteract the jarring gold and dollar outflows. These measures included an increase in short-term interest rates, borrowing from the IMF quota or the US gold tranche, as well as a US commitment to force surplus western European allies to finance the US balance of trade³⁸.

All of these measures did not prevent either the outflow of capital from the US, or the ensuing run on US gold market. This incapability further undermined the US payments position and, through a teetering competitive edge of US manufacturing, the US foreign trade. Therefore, by the mid-1960s it turned out a negative correlation between transnational gold movements, the Bretton Woods international monetary regime and the scale of international trade integration.

From the mid to the end of the decade the US monetary authorities and the US government pushed forward such credit restraint not so much by opposing any reduction in the discount rate, as by a string of other monetary, banking and fiscal policies. In first instance, they repeatedly countered any decrease in reserve requirements of banks on foreign loans and banking operations. Secondly, they raised taxation on foreign portfolio investments of US banks. Furthermore, they pursued a continued, although unsuccessful, attempt to curb the flow of private capital from the United States to the European financial centers by raising interest rates on long-term financial assets. Finally, they urged US corporations to repatriate capitals³⁹. The attempt to prevent the

outflow of capital from the US proved to be largely unsuccessful to restore equilibrium in the US balance of payments on capital account as short-term financial assets were the bulk of capital outflows from Wall Street throughout the period. The meteoric expansion of dollar denominated short-term capital markets, in part due to long-lasting interest rate differential between London and New York, coupled with the outburst of US overseas military expenditures and foreign investments by US corporations, jeopardized the US struggle to reduce the outflows of gold and its sequential effects on the international confidence in the dollar, on the competitive position of US manufacturing in foreign markets and on the stability of international trade integration.

Such failure to revert the short-circuit between transnational gold movements, a tottering gold in exchange markets, a weakening international monetary system, and deteriorating international exchanges in goods and services was-not coincidentally- paired by the corresponding declining European confidence in the US gold reserves to foster intra-European payments.

Over the course of the 1960s the role of gold became always more important to the reserve policies of the western central banks. Most western European countries increased the gold share in their reserves. To put it another ways, metallic reserves at central banks increasingly contributed to back money supply and the liquidity available at commercial banks. The combined run on US gold stock with such tendency by the European central banks to increase their metallic reserves, in 1965 induced the Bundesbank to ask the Committee of Governors of the European Central Banks to plan settlements of intra-European payments based on intra-European gold flows. According to the German monetary authorities, in pushing forward the integration of their agricultural, manufacturing and capital markets currently under way, the six members of the European markets should neither set the intra-European payments nor offsetting their balance of payments deficit by drawing on US gold reserves, a move considered harmful to world trade. By contrast, the six members of the EEC should offset their balance of payments deficit through intra-European gold transfers⁴⁰. In making

³⁷ FOMC Meeting Minutes, August 21, 1962, in FOMC. For a general appraisal about the positive impact of debt-prepayments on the US balance of payments. See also Department of the Treasury, 1963, p. 79.

³⁸ In this respect see the work conducted on the subject by the Long Range International Payments Committee: JFKPL, Papers of John F. Kennedy, Presidential Papers, NSF, folder "Principal Papers Prepared for the Cabinet Committee on Balance of Payments in connection with its Report to the President", April 6, 1963, "Financial Measures for the U. S. Balance of Payments Deficit 1963-64", March 15, 1963, document attached to Robert V. Roosa, Memorandum to the Secretary "Report on Methods of Financing the Balance of Payments Deficits during 1963 and 1964" pp. 4-6.

³⁹ Lyndon Baines Johnson Presidential Library, Austin, TX (henceforth LBJPL), Papers of Henry Fowler, b. 52, Henry Fowler, Memorandum for the President, October 12, 1965; Bordo and Humpage, 2016, p. 112; Gibson, 1971, pp. 651-652; D'Arista, 2013, pp. 8-9;

⁴⁰ Deutsche Bundesbank, None à l'attention du Comité des Gouverneurs des instituts d'émission des pays de la CEE, "La politique des réserves monétaires des instituts d'émission des pays de la CEE", 15 June 1965,

this argument, the German monetary authorities reckoned that the stunning US balance of payments deficit was the litmus to the decline in confidence in the reserve currencies, both the US dollar and to a lesser extent British sterling, that had caused a widespread tendency to increase metallic reserves held at western central banks. Therefore, the Bundesbank correctly pointed to the linkage between a weakened dollar, the prolonged US balance of payments deficit, and the increased importance of gold to central banks reserve policies and to international trade and monetary integration at large. Therefore, by the time in 1967 the devaluation of British Pound brought into being a loss in global reserves that accelerated international monetary arrangements to create a new reserve unit, the system was already under strain and transnational gold movements undermined the smoothly functioning of the international trade and payments system laid down at Bretton Woods. In 1968, the creation within the IMF of the Special Drawing Rights (SDRs), conceived as a new international reserve unit to supplement dollar-denominated international liquidity⁴¹, was thought to reduce dependence of the international system on gold for market purposes.

Therefore, on the eve of the British pound devaluation that further undermined the gold-dollar standard and international payments, the linkage between transnational gold movements and reduced international trade and monetary integration was self-evident. In this respect, it is worth recalling the combined decline in the strength of the dollar in foreign markets, the process of unfettered transnational capital flows underway, a downward competitive position of US manufacturing, the weakening in the US balance of payments, and the continued decline in US gold stock throughout the 1960s (see Table 1).

CONCLUSION

At an early stage, from the Roosevelt administration's foreign monetary policy through to WWII and up to the late 1940s, apparently the increase in transnational gold movements favored international trade integration and payments. Certainly, since as early as the interwar years it was straightforward that the balance between gold

Table 1. US Gold stocks

Year-month	US Gold stocks in millions of dollars
1967	11.982
1968-January	11.984
1968-February	11.883
1968-March	10.484
1968-April	10.484
1968-May	10.384
1968-June	10.367
1968-July	10.367
1968-August	10.367
1968-September	10.367
1968-October	10.367
1968-November	10.367
1968-December	10.367

Source: Federal Reserve System, *Annual Report of the Board of Governors of the Federal Reserve System*, 1968, Table 16, pp. 384–385.

and dollar held on reserve was a prerequisite for a smoothly functioning international trade system. The Roosevelt administration foreign gold purchases to stabilize the value of gold was specifically aimed, as seen in section 1 of this contribution, at reducing the US trade surplus and increasing the competitive edge of US low-capital intensive manufacturing that depended the most on foreign exchange policy. Based on the US restitution policies pursued by Washington during WWII, the US reckoned gold as both a means of payments and a reserve unit of account. Therefore, gold reserves and movements were viewed as linchpins to increase international trade. In the postwar reconstruction scenario the increased transnational gold sales and purchases brought gold to center stage not only in US foreign monetary policy but to international trade relations at large. However, since the US balance of payments run into deficit in the early 1950s, the outflow of gold and dollars from the US highly destabilize the process of international trade and monetary integration.

By keeping an eye to the long postwar era up to the devaluation of British Pound that opened

p. 16. In European Central Bank Archives, Frankfurt. <http://www.ecb.europa.eu/ecb/history/archive>.

⁴¹ Wachtel, 1990, p. 78; James, 1996, p. 172; Bird, 2003, pp. 267 ff.; Wilkie, 2012, pp. 34 ff.

up the crumbling of Bretton Woods, it is plausible to establish a linkage between the plummeting of the dollar in exchange markets, the increasing importance of gold to reserve policy and international financial relations, and the declining competitive position of US manufacturing and capital markets up to the end of dollar's convertibility into gold. In any case, the US failure to restore confidence in the dollar through action on either the capital or the current account component of

the US balance of payments accounts for and is strictly intertwined with the growing importance of gold and international run on US gold stock that chronicled the 1960s. To summarize, the combined crisis of the dollar and the role of gold in shaping reserve policies and international payments had an effect on the stability of an international trade and capital system pegged to the dollar as the basis for reserves and means of international payments.

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Price Theory of Monies, from Global History

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Abstract. This essay suggests replacement of all current monetary theories with a “Price Theory of Monies” (PTM). The PTM specifies four monetary functions: (1) Medium of Exchange, (2) Unit of Accounting, (3) Store of Value, and (4) Measure of Relative Values. The first three functions correspond with macroeconomic textbook counterparts. The Measure of Relative Values function, in contrast, corresponds with money in microeconomic analysis. Combination of all four monetary functions yields a theory without need for the microeconomics-macroeconomics dichotomy characteristic of conventional economic theory since the early 20th century. It is impossible for any single money to simultaneously fulfill all four monetary functions because the “Measure of Relative Value” is restricted to an *intangible* money, whereas the other three monetary functions require *tangible* monies. Application of the PTMs to monies today reveals that monies and credit instruments are distinct. In addition, non-credit-monies are distinct from credit-monies. Finally, trust plays a critical role in establishment and maintenance of market values of all tangible monies as well as market values of all credit instruments.

Keywords: Disaggregation, laws of supplies and demands, monetary production, monetary functions, Mesopotamia, price theory of monies, quantity theory of money, tangibility/intangibility, utility theory, wealth.

Теория цены денег. Из всеобщей истории

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Аннотация. В данной статье предлагается заменить все существующие монетарные теории «теорией цены денег». Предлагаемая теория определяет четыре функций денег: (1) средства обращения; (2) средства учета; (3) средства сохранения стоимости и (4) меры относительных стоимостей. Три первые функции совпадают с обычно перечисляемыми в экономических учебниках по макроэкономике. В отличие от них, функция меры относительных стоимостей принадлежит к сфере микроэкономики. Комбинация этих четырех функций позволяет избежать дихотомии макроэкономического и микроэкономического подходов, что является характерным еще с начала XX века. Невозможно выполнение деньгами одновременно всех четырех функций, поскольку мера относительных стоимостей ограничена к неосязаемым деньгам, тогда как остальные три функции требуют осязаемых денег. Применение предлагаемой теории позволяет обнаружить различие между деньгами и кредитными инструментами. Кроме того, некредитные деньги отличаются от кредитных денег. В конечном счете доверие играет критическую роль в установлении и поддержании рыночных стоимостей всех осязаемых денег, а также рыночных стоимостей всех кредитных инструментов.

Ключевые слова: дезагрегация; закон спроса и предложения; монетарная продукция; функции денег; Mesopotamia; теория цены денег; количественная теория денег; осязаемость/неосязаемость; теория полезности; богатство.

DISAGGREGATION REQUIRED

Discussion of silver's pivotal role during the sixteenth-century birth of globalization necessitates construction of monetary theory based upon disaggregation¹. Moreover, evidence from global history contradicts aggregation practices of mainstream monetary theorists (and their critics). Consider the four main monetary substances — silver, gold, copper, and cowry shells — traded globally from the 16th through 18th centuries². Most silver was mined in Spanish America and (before the 18th century) Japan, while silver's principal end-markets were in China and (to a lesser extent) India. Gold production was more broadly dispersed, although concentrated in West Africa, Columbia/Brazil, Japan (late 17th century) and Southeast Asia. Although not a major gold producer, China exported gold to Europe and Japan while simultaneously importing silver (1540s-1640 and 1700–1750). Leading world producer in the late 17th century, Japanese copper was exported mainly to China, but also to Europe. Production (aquaculture) of cowry shells was concentrated in the Maldiv Islands (Indian Ocean) and cowries were exported mainly to end-markets in Asia, but also up to a million pounds per year were destined for end-markets in West Africa (via European ports). In short, each monetary substance followed distinct patterns over centuries. Thus, aggregation of these and other diverse monetary substances into a catch all category "money," as instructed by economics textbooks, conflicts with evidence from global monetary history. Unique locations of supply and demand concentrations characterized individual monetary substances, implying need to practice theoretical disaggregation to the maximum extent possible.

Evidence also contradicts aggregation within monetary subsets such as "silver monies." Irigoien (2013) points to Chinese imports of Mexican pesos after Mexican independence early in the 19th century, for instance, yet Chinese customers clearly preferred the Carolus peso in particular. Inferior non-Carolus coins were rejected, melted,

or significantly discounted within Chinese end-markets. Moreover, silver *bullion* (*sycee*) was exported from China while silver Carolus coins were simultaneously imported into China. Prices of specific forms of silver bullion and silver coins clearly depended upon detailed characteristics of each type of silver³.

MONETARY FUNCTIONS: INTANGIBLE MONIES VERSUS TANGIBLE MONIES

Ancient bookkeepers chose fine silver weight as accounting unit for expression of values of things owned/owed. As is true today, ancient accountants preferred monetary standards anchored to objects of relatively stable value through time. Silver often served as the Monetary Standard. The shekel, representing c8.33 grams fine silver, was the Mesopotamian unit-of-accounting money around 3000 BCE. This unit-of-accounting-money shekel was *intangible*. Keep in mind that *tangible* coins are first known to have appeared over two thousand years later in Lydia (around 600 BCE). Alexander the Great subsequently introduced Greek coins (drachm, didrachm, and tetradrachm) after conquest of Babylonia in 331 BCE. An *ideal* didrachm "coin" represented 8.6 grams fine silver (slightly more than the ideal 8.33 gram unit-of-accounting shekel), yet virtually no tangible didrachm coin actually contained 8.6 grams fine silver, because physical didrachm coins suffered wear and tear (and adulteration). Thus, one tangible didrachm coin contained different intrinsic content than another tangible didrachm coin contained; this explains why coins were weighed rather than counted during transactions. Virtually no tangible didrachm coin contained as much silver as the intangible 8.6 grams that the didrachm "link-money" represented. Tangible didrachm coins and the intangible didrachm "coin" were fundamentally different.

Despite almost identical weight representations, the intangible shekel and the intangible didrachm served separate monetary functions.

¹ See Flynn and Giráldez (1995; 2002; 2008) for elaboration on silver's pivotal role in originating globalization.

² Flynn and Giráldez (1997) provide an overview of these four monetary substances in global context.

³ Aggregation of coins and non-coin monies aggravates the problem. Kishimoto (2011), Kuroda (2008), von Glahn (2011) and other leading monetary historians state repeatedly that specific monies commanded distinct market values at particular locations and times.

The unit-of-accounting shekel represented a quantity of fine silver (8.33 grams) *directly*. The link-money didrachm represented a specific quantity of fine silver (8.6 grams) *indirectly* via a conceptual “coin” that rarely had a counterpart in a physical sense. Unit-of-accounting shekel entries referred directly to specific quantities of fine silver; an entry valued at two shekels, for instance, signaled a transaction (or asset held) market value equal to the market value of 16.66 grams fine silver. The “link-money function” of the *ideal* didrachm “coin” was similar, but distinct from unit-of-accounting shekel entries that existed millennia prior to emergence of coinage⁴. The unit-of-accounting shekel *directly* represented a quantity of silver without need for any intermediary “coin.” The quantity of silver *indirectly* represented by an intangible didrachm required existence — at least in a conceptual sense — of a perfect didrachm intermediary “coin” that *would contain* a certain quantity of fine silver (were such an idealized coin to physically exist). Intervention of an *ideal* coin in service of the link-money “coin” function evidently emerged after invention of physical coins; the unit-of-accounting function, however, existed both before and after invention of coins. Although each of these two functions represented nearly the same quantity of fine silver, the intangible shekel served one monetary function while the intangible didrachm “coin” served a different monetary function.

The medium-of-exchange monetary function necessarily involves tangible monies, including physical didrachm coins (of various weights), barley, dates, and numerous other commodity monies. Moreover, the Mesopotamian monetary system sketched above is properly characterized as on a Silver Standard, since market values of accounting entities corresponded to market values of specific quantities of fine silver represented. A Monetary Standard based upon *tangible* silver implies conceptual translation of

⁴ Similar to the Mesopotamian shekel thousands of years earlier, intangible Dutch guilders (representing 10.93617 grams fine silver) served the “unit-of-accounting” function, while an ideal Riksdollar (25.7 grams intrinsic content silver) served the “link money” function (between 1570 and 1681 CE). Together, the link-money Rixdollar and unit-of-accounting Guilder — both intangible — anchored Dutch accounting during the 16th and 17th centuries CE. See Flynn (2015b, p. 80).

each accounting entry into equivalent value of a particular quantity of fine silver⁵.

To summarize, four distinct monetary functions have been identified thus far. The intangible shekel served (1) the unit-of-accounting function. The intangible didrachm “coin” served (2) the link-money function. Tangible silver served (3) the monetary-standard function. And various tangible substances served (4) the medium of exchange function. Note that monies within each of these four categories performed one — and only one — monetary function. The intangible unit-of-accounting money could not function as link-money, and vice versa. Similarly, tangible medium-of-exchange monies served a different function than did the object serving as monetary standard (except that a quantity of fine silver could act both as exchange medium and standard of value). Thus, no specific money could in principle satisfy all four monetary functions simultaneously, given that tangible and intangible classifications are mutually exclusive. Disaggregation of monies — as well as disaggregation of monetary functions — is required for proper conceptualization.

The conventional macroeconomic definition of (aggregated) money, of course, includes a fifth (5) store-of-value monetary function. Storage of value is a feature common to all tangible “goods,” as opposed to “services” which are non-storable by definition. In our case, application of this store-of-value function is restricted to individual tangible monies, not “money” (in the aggregate sense) because some components of “money” can rise in market value while other components of “money” can simultaneously fall in market value. Our crucial sixth and final (6) measure-of-relative-values monetary function warrants separate consideration in the following section.

MEASURE-OF-RELATIVE-VALUES MONETARY FUNCTION

Relative stability in silver’s market value over extended periods of time rendered the Silver Standard a useful monetary benchmark against which to gauge market values of other things for thousands of years. As true for all tangible goods, the market value of silver

⁵ For thorough treatment of the (currently ignored) monetary-standard function, see Mason (1963).

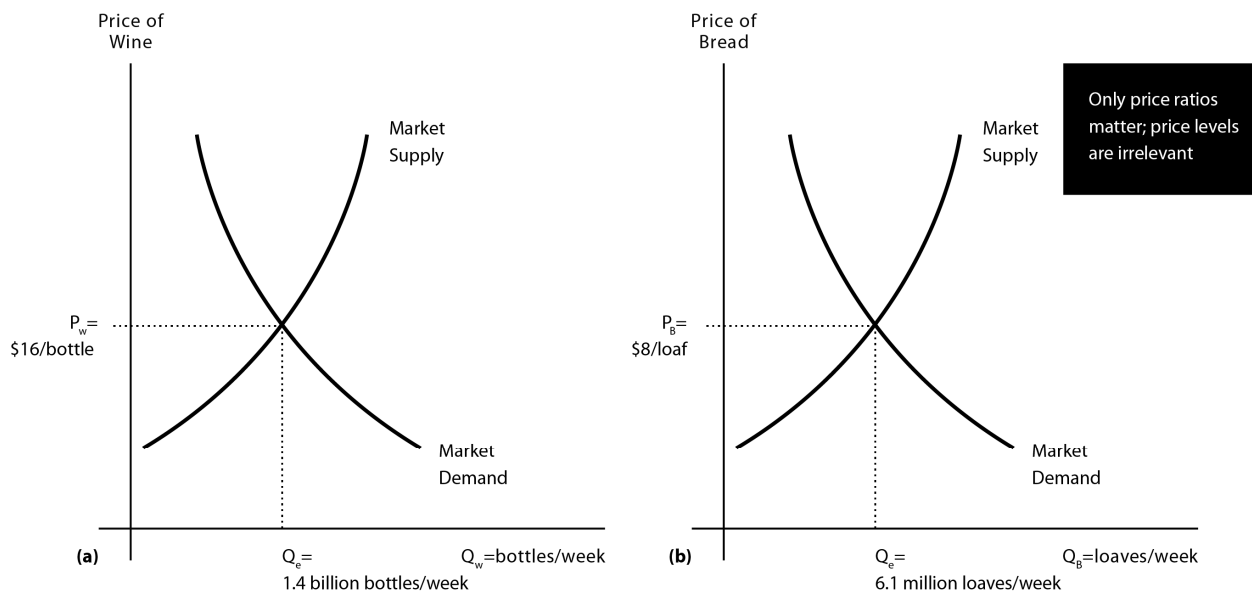


Figure 1. Relative Prices in Microeconomics: Only Ratios Matter

varied over historical time, however, so no monetary standard could serve as a perfectly stable benchmark. When market value of silver (and thus silver monies) fell — e.g. during the Price Revolution of the long sixteenth century — the result was price inflation (prices expressed in tangible silver monies of fixed contents). Historical episodes of price inflation/deflation have usually been analyzed via macroeconomic theory, on the other hand, a practice that immediately plunges the analyst back into the monetary aggregation morass alluded to above. Market values of gold (and gold coins) changed relative to market values of silver (and silver coins) over time — as continues to be true today — so statements to the effect that there was some percentage change in market value of “the money” are inherently ambiguous. There could be price inflation relative to a tangible silver coin, for instance, while price deflation could simultaneously occur relative to a tangible gold coin. There are countless historical examples whereby the intrinsic content of one money gained (or lost) market value relative to another money constructed of a different intrinsic substance. What is needed is a supply-and-demand model that describes price determination specific to the distinct tangible money at issue; only then can observed price movements be disentangled in order to identify the extent to which specific monetary and non-monetary components are responsible for a change in price.

Determination of relative market values for specific products is, of course, the purview of Microeconomic analysis. As illustrated by historical contradictions listed above, however, exclusive relegation of monetary theory to macroeconomics since the early twentieth century remains a formidable obstacle to understanding. It behooves us to think deeply about the nature of the peculiar intangible money of microeconomic analysis: The “ratio dollar.” The intangible ratio dollar displayed in microeconomics fulfills an indispensable sixth (6) Measure-of-Relative Values Monetary function that is crucial for construction of the non-standard Price Theory of Monies proposed in this essay⁶.

Monetary aggregates in macroeconomics textbooks directly contradict the ratio money displayed in microeconomics textbooks: the microeconomic ratio-dollar is intangible, while “money” in macroeconomics must be tangible in order for value to be stored or exchanged. Absolute numbers chosen to represent microeconomic prices, such as \$16/bottle and \$8/loaf shown

⁶ I was mistaken when I previously labeled this “ratio dollar” a Ratio-Unit-of-Account Money (RUAM) in Flynn (2015b) and elsewhere. The “ratio dollar” has never been used for *accounting purposes*. Indeed, “ratio dollars” can never be recorded by an accountant because absolute values are arbitrarily chosen (only ratios matter). Thus, the label “Measure of Relative Values Money” (MRVM) used here is a better choice of terminology because it reduces risk of confusing this intangible “ratio money” with intangible Unit-of-Accounting Monies that pragmatic accountants have written down for thousands of years.

in Figure 1, are arbitrary: The central point is that division of the price of wine by the price of bread yields a *relative price* of 2 loaves/bottle. All economists know that microeconomics concerns relative prices, not absolute prices. The price of each item could be arbitrarily doubled (to \$32/bottle and \$16/loaf), cut in half (to \$8/bottle and \$4/loaf), or multiplied by any scalar: Relative price remains 2 loaves/bottle. Money in microeconomics is portrayed as a “veil” in the sense that the ratio-dollar cannot *contain* value. Rather, the intangible microeconomic ratio-dollar fulfills the sixth (6) Measure-of-Relative Values Monetary function because calculation of “relative prices” involves cancelation of intangible ratio-dollars.

Tangible monies cannot be accommodated within microeconomic analysis for several reasons. First, tangible monies are conventionally (and correctly) viewed as inventory stocks. Current rates of monetary production matter only to the extent that they influence accumulated monetary stocks (based upon past production). Microeconomic quantities such as bottles/*week* or loaves/*week* are time-dimensioned concepts that concern current (profit-maximizing) production and current (utility-maximizing) consumption. Microeconomic analysis does not acknowledge inventory supply and inventory demand functions that play essential roles in monetary theory. Second, microeconomic theory involves analysis of singular products one-by-one, and therefore macroeconomic-style aggregation across dissimilar products is impermissible. Third, the market value of money cannot be expressed relative to that same money itself; the price of a dollar bill is one — expressed in terms of that same dollar bill — irrespective of changes in its purchasing power. For these and other reasons, it was deemed impossible to integrate monetary theory within utility analysis. As a result, economic theory bifurcated into (incommensurate) “microeconomic” and “macroeconomic” branches, terminology fabricated during the early 20th century.

The unintentional — and generally unrecognized — substantive alteration of classical monetary theory by neoclassical inversion of the classical monetary theory, the relative values of goods and the value of money relative to goods no longer had a common explanation. Since

different methodologies were employed by neoclassicists in value theory and monetary theory, respectively, each theory required abstraction from the other. Consequently, relative values were subsequently explained in real terms, abstracting from the value of money, while the value of money was illuminated in abstraction from relative values. (Mason 1974, p. 568)

It was obvious, when coming back to money after working on consumer demand, that there was a parallel; the same technique that we had been using in demand theory could be used in this other context. The former was a flow problem, while this was a stock problem... But these differences were no obstacle to the use of a similar method. (Hicks 1982, pp.8–9)

Actually, this flow-stock distinction posed an insuperable barrier to unification of monetary theory and value theory. Monies are stocks. Microeconomics cannot handle stocks. Moreover, monies are non-consumables incapable of utility generation. People hold monetary balances (according to *Macroeconomics* reasoning), not because monies generate happiness/utility directly, but because monies are exchangeable for consumables *at a future date*⁷. Justification for holding current monetary balances is ironically based upon *not holding* those monetary balances in the future, an unavoidable conclusion based upon assumption that the sole source of utility is consumption⁸. Also, given that production theory resides within (time-dimensioned) microeconomics, inventories-focused monetary economics offers no theory of monetary production.

⁷ For example, Ludwig von Mises (1971 [1924], p.98): “Consideration of the subjective value of money without discussion of its objective exchange-value is impossible. In contrast to commodities, money would never be used unless it had an objective exchange-value or purchasing power. The subjective value of money always depends on the subjective value of other economic goods that can be obtained in exchange for it.”

⁸ The Price Theory of Monies refers to application of the Laws of Supplies and Demands to monies. The Laws of Supplies and Demands assume two sources of utility — (1) inventory holdings themselves and (2) consumption — necessary for derivation of Inventory Demand functions. See Doherty and Flynn (1989 Appendix) for mathematical derivation of inventory demand. Please note that the title of this three-decade old 1989 essay is misleading on several counts. First, the model is a “price theory,” and not a “quantity theory.” Second, it is not “microeconomic” (although utility-based). Third, it is a theory of “monies,” and not a theory of aggregate “money.”

The neoclassical “quantity theory,” unlike the classical, contained no elucidation of the “quantity.” In other words, the received “supply theory” of the value of money lacks a theory of “supply.” Hence the quantity theory was left suspended in mid-air — without visible means of support. Postclassical writers have perforce resorted to the preclassical technique of describing the *results* of *assumed* changes in the quantity of money — a process eschewed by the classical school (Mason 1974, p. 567–568)

Mason states accurately that no Macroeconomic theory of monetary production exists. Without explaining origins/production of monetary stocks, pre-existing stocks are simply assumed to exist, followed by “*results of assumed* changes in the quantity of money.” Furthermore, monetary stocks are viewed as policy variables subject to current manipulation by authorities, thereby avoiding a theory of monetary production. In essence, history is avoided.

SIX MONETARY FUNCTIONS SUMMARIZED

Six monetary functions are listed below, with asterisks indicating three functions currently acknowledged in conventional monetary theory:

- *Historical Functions of Monies (Price Theory of Monies)*
- Unit of Accounting* (intangible)
- Medium of Exchange* (tangible)
- Store of Value* (tangible)
- Standard of Value (tangible)
- Link Money (intangible)
- Measure of Relative Values (intangible)

Mainstream monetary theory requires simultaneous fulfillment of *all three* conventional functions of money — Unit of Accounting, Medium of Exchange, and Store of Value — for qualification as “money.” The 3000 BCE accounting shekel and Dutch Guilder are disqualified from conventional canon, since these (intangible) unit-of-accounting monies *contained* zero value. Intangible shekels and intangible guilders fulfilled the Unit-of-Accounting function alone, whereas a quantity of silver fulfilled the Standard-of-Value function alone, and various tangible silver and non-silver objects served Medium-of-Exchange and Store-of-Value monetary functions only. Monetary functions involv-

ing storage and exchange require tangibility. Simultaneous fulfillment of all three mainstream monetary functions is impossible in principle; thus, macroeconomic requirements force one to adopt the ridiculous conclusion that zero monies have existed throughout history.

The Unit-of-Accounting must be *tangible*, according to mainstream theory; otherwise, the intangible Unit-of-Accounting function would contradict tangible Medium-of-Exchange and tangible Store-of-Value functions. Contrary to this implicit conventional claim, the Price Theory of Monies asserts that the Unit-of-Accounting function requires an *intangible money*⁹. Someone is wrong. Functions 2 and 3 — “Medium of Exchange” and “Store of Value” — are essentially the same for conventional monetary theory and the Price Theory of Monies. The “Standard of Value” monetary function (#4) was jettisoned from mainstream monetary theory a few generations ago, notwithstanding that this Standard-of-Value function use to play a key role in discussions of monetary theory¹⁰. In any case, monetary history requires resuscitation of the Standard-of-Value function. The Link-Money function (#5) commonplace in Europe (e.g. intangible Dutch guilder) was preceded millennia earlier in the form of ideal didrachm coins (and no doubt many others). Unacknowledged in mainstream discussions of monetary theory today (to my knowledge), the (#6) “Measure-of-Relative-Values” monetary function has paradoxically served as intangible “ratio-dollar” in microeconomic theory for about a century, albeit *deus-ex-machina* since microeconomics offers no theory of money.

⁹ All accounting balance sheets today are expressed in terms of intangible monies. Assets, liabilities, and net worth numbers expressed in US dollars, for instance, involve market value *estimates* of tangible US dollars that perhaps could be generated/paid *if complete liquidation were to occur*. But current ownership of assets and obligations indicates that liquidation has not occurred. The issue of *intangible* units-of-accounting is further discussed in Flynn (forthcoming). The central point is that all units-of-accounting are intangible monies past and present (as was the accounting shekel five thousand years ago).

¹⁰ See Mason (1963) for discussion of monetary standards, as well as evolution from Classical to Neoclassical monetary theory generally. Jursa (2010, p.504) distinguishes medium-of-exchange versus monetary-standard functions: “Barley was also used as money medium, as a means of payment, but not as a standard...”

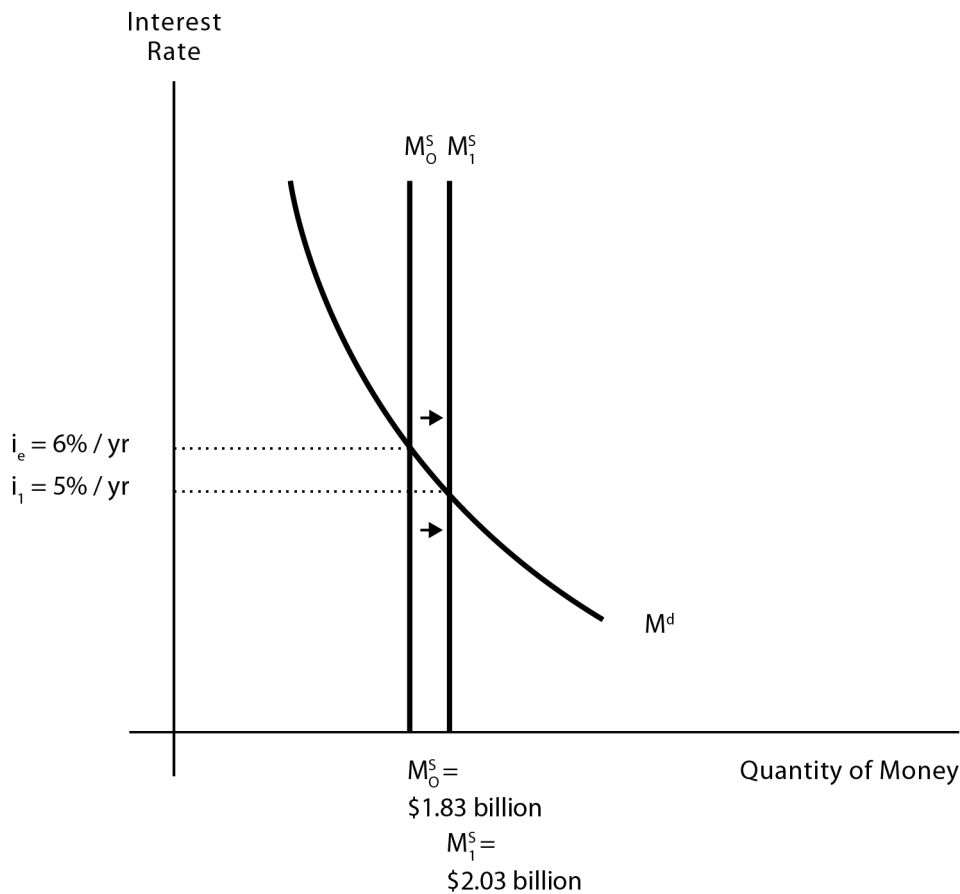


Figure 2. Central Bank Manipulation of the Interest Rate

PRICE THEORY OF MONIES VERSUS QUANTITY THEORIES OF MONEY

Relative prices cannot exist within modern monetary theory because macroeconomics excludes the *intangible*-ratio dollar (ir\$) of microeconomics. Moreover, macroeconomic methodology subsumes individual items within analytical *aggregates* such as Consumption, Investment, GDP and Monetary Stocks. It thus makes no sense to discuss “the” relative price or “the” cost of producing hodgepodes of dissimilar monies congealed within monetary aggregates. Also, monetary quantities are point-in-time inventory stocks whereas microeconomic quantities are time-dimensioned flows.

Based upon work of John Maynard Keynes (1920s–1930s), mainstream economists settled on “the interest rate” as textbook “rental price of money.” *The* interest-rate transmission mechanism connected “monetary” and “real (i.e. non-monetary)” sectors, thereby inadvertently creating formidable obstacles for monetary historians. For instance, it is impossible to develop

a theory of coin production based upon a coin’s “price” vis-à-vis “cost of producing that coin” while conceptualizing “the interest rate” as a cost/rental price of coin-money¹¹. Be that as it may, this interest-rate channel at least furnished mainstream monetary theorists a patchwork route whereby monies could be included in policy debates. Worldwide focus of monetary policy on interest rates today indeed reflects dominance of Keynesian prescriptions, leading to relentless pursuit of monetary policy stimulation through impacts of low interest rates upon investments. This worldwide strategy *appears to have been effective* over recent decades, but unprecedented global debt escalations prompt many today to ponder whether mounting debt regimes are sustainable, particularly in context of dramatic wealth concentrations (e.g. Piketty 2014). Prominent policy makers worldwide exude

¹¹ Rather, the Price Theory of Monies expresses price of each tangible money in terms of an intangible measure-of-relative-values “ratio money”, thereby enabling expression of distinct prices for each specific money. This procedure eliminates need for artificial imposition of “the” abstract interest rate as rental-price of amorphous aggregations of dissimilar monies.

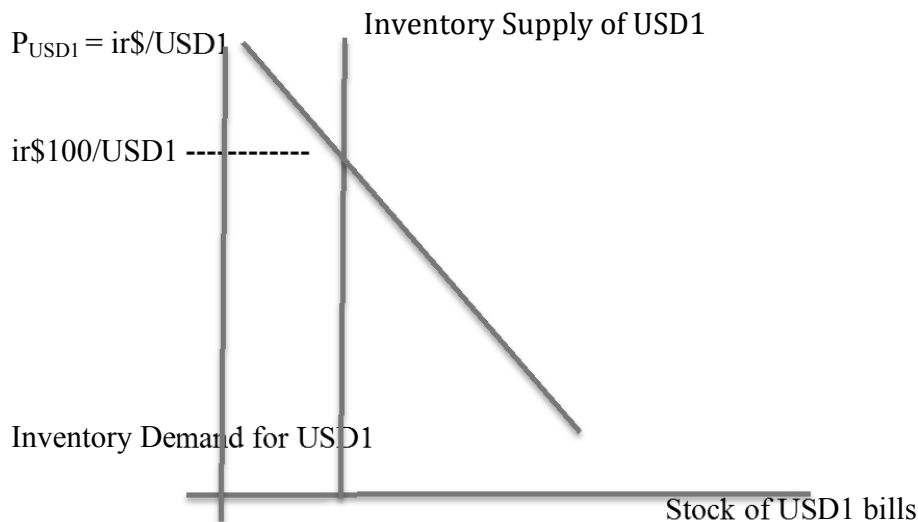


Figure 3. Determination of the ir\$-price of a One-Dollar bill

confidence in global financial solidity nonetheless. Incompatibility between monetary theory and historical evidence, on a more somber note, suggests that confidence in mainstream theory is misplaced. Interest rates are not determined by intersection of aggregate money supply and aggregate money demand¹². Moreover, accumulated monetary stocks must be explained, rather than simply assumed to exist, and the same holds for accumulated stocks of non-monetary goods as well. History must occupy the center of analysis. This morning has already faded into history. Inventory stocks today are historical artifacts that belong center stage in all analyses that claim to portray central features of economic reality.

A PRICE THEORY OF MONIES

For more complete description of the Laws of Supplies and Demands, see Flynn (2015). Application of these Laws to tangible monies is sketched here. Laws of Supplies and Demands represent a “Unified Theory of Prices” in the sense that prices of all goods and services — including tangible monies — are expressed in the same intangible-ratio dollar (ir\$). All goods are treated as inventory stocks, including tangible monies. While conventional money sup-

ply and money demand are already couched in Inventory Supply and Inventory Demand terms, mainstream labeling of axes contrasts sharply with labeling under the Price Theory of Monies.

Conventional monetary axes are labeled “the interest rate” and (aggregate) “money stock” (Figure 2)¹³. Price Theory of Monies labels are fundamentally different. The price of each tangible money — e.g. US one-dollar bill, Figure 3 — is expressed relative to intangible-ratio dollars (ir\$). The quantity axis label in Figure 2 refers to accumulated US one-dollar bills at an instant in time¹⁴. Price is, not “the interest rate,” but the exchange value at which US one-dollar bills could be *purchased/sold*. Market price of the US one-dollar bill ($P_{USD1} = ir\$100/USD1$) is arbitrarily posited in Figure 3.

The price of a hypothetical brand of red wine is likewise determined by interaction of Inventory Supply and Inventory Demand (Figure 4). There exist 52,132 bottles of x-red-wine at market price ($= P_{x-red-wine} = ir\$1000/bottle\ x-red-wine$). Division of the ir\$-wine price by the ir\$-US dollar price cancels intangible-ratio dollars (ir\$), yielding price of (tangible) 10 USD1/bottle of x-red-wine. This exchange rate is 10:1¹⁵. A non-

¹² Open-market operations these days increase stocks of certain types of money through purchase of debt instruments. Purchase of debt instruments increases prices of financial instruments bought, thus lowering interest rates in the process. Stocks of monies could be increased through purchases of non-financial assets instead, however, which would avoid this interest-rate channel. See Flynn (forthcoming) for discussion of this point.

¹³ Textbooks sometimes label quantity “real balances” (M/P), a monetary aggregate divided by a weighted Price Index. The Price Theory of Monies insists upon disaggregation of individual monies already considered inherently “real” (obviating need for any divisor such as P).

¹⁴ Monetary units are counted in the same fashion as non-monetary items, eliminating need for “real balances” as in M/P.

¹⁵ Van der Spek (2016, p. 139) correctly refers to Babylonian price lists as “exchange rates” vis-à-vis a quantity of silver.

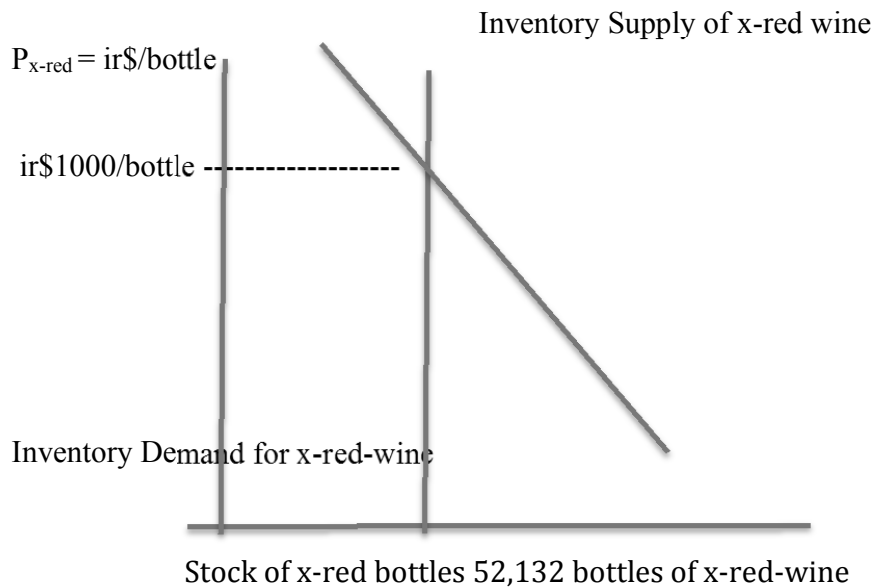


Figure 4. ir\$ Price of x-red-wine

economist would (accurately) state that this wine's price is ten bucks/bottle.

While this presentation of price determination may appear uncontroversial, it is unconventional. First, Inventory Supply and Inventory Demand determine the wine's price; wine price is *not* determined by intersection of "production supply" and "consumption demand" as depicted in conventional (flows-only) microeconomic analysis. Second, conversion of intangible-ratio dollar price (= ir\$1000/bottle in Figure 4) into a 10 *tangible* one-dollar-bill price per bottle is achieved through simple division of the ir\$ wine-price by the ir\$ USD1-price. Conventional Microeconomic wine-price is expressed as 10 *intangible dollars/bottle*, whereas Unified Theory wine-price is expressed as 10 *tangible dollars/bottle* (calculated via ratio of intangible dollars). In sum, physical/tangible dollars and physical/tangible non-monetary goods unite within Laws of Supplies and Demands. Conventional isolation of monetary aggregates within the silo Macroeconomics — divorced from "real good" disaggregates within the silo Microeconomics — is unnecessary. The Unified Theory of Prices accommodates all goods and services. Tangible inventory stocks of all monetary and non-monetary goods are brought into unified focus¹⁶.

¹⁶ The Laws of Supplies and Demands specify three supply functions: production supply, inventory supply, and sales supply. Three demand functions — purchase demand, inventory demand, and consumption demand — interact in

MINT ACTIVITY AND COIN MELTING

A bewildering variety of coins have been minted around the world throughout history, both with government authorization and via counterfeiting. The Price Theory of Monies permits modeling of both types. Mint profitability required that price of a coin (or any tangible money) exceed cost of production. Even monopolistic royal mints faced competition, since owners often sold bullion to foreign mints or within bullion markets. Large internationally-traded silver coins tended to yield a small premium (perhaps 5%) vis-à-vis silver bullion due to competitive forces, while silver-bullion and specie values normally moved in tandem over time.

In general, attraction of bullion required that the mint price match bullion-market price. Vigorous mint production raised silver coin stocks, on the other hand, implying downward pressure on silver coin value vis-à-vis silver bullion value. Once silver bullion price roses enough (relative to coin) to overcome silver surrendered during initial seigniorage charges, full-bodied coins were melted. The Price Theory of Monies describes market mechanisms that determine mint profitability, as well as when profitable to melt coins¹⁷. Laws of Supplies and Demands apply to

dynamic fashion. For an outline that is too long to include here, see Flynn (2015a, pp. 74–77).

¹⁷ For more detail on minting and melting of coins, see Flynn (2015a).

any monetary substance, whether produced with or without authorization, and to non-monetary goods in general.

CONCLUSIONS

The Price Theory of monies was developed in response to historical evidence that contradicts mainstream economic theory; Laws of Supplies and Demands emphasize point-in-time inventory analysis (while integrating conventional flow concepts). Classical economists treated individual monies and non-monetary products with the same tools; relative values of monies and non-monies could be viewed, for instance, relative to embodied labor time.

Today's Microeconomics-Macroeconomics Dichotomy replaced Classical coherence. (Mason 1974) Utility analysis yielded microeconomic Laws of Supply and Demand applicable to "real" (non-monetary) products. Laws of Supply and Demand cannot apply to tangible monies that are (a) not "consumables," (b) accumulate as inventory stocks, and (c) cannot be valued relative to themselves. Monetary theory was forced from Microeconomic value theory, while Macroeconomics evolved as conceptual space for monies and other items likewise incommensurate with Microeconomic theory.

The initial stock of money is assumed given in macroeconomics. This assumption is unacceptable for two reasons: (1) accumulated stocks of each monetary item require explanation (not assumption), and (2) monetary aggregation renders impossible consideration of "the value of" or "the price of" aggregates of dissimilar monies.

Consideration of monies over the past five thousand years reveals at least six monetary functions, rather than the mere three functions acknowledged in textbooks. Moreover, three of the six monetary functions involve intangible monies, while the remaining three refer to tangible monies. Thus, simultaneous fulfillment of all monetary functions is impossible in principle. Monetary disaggregation is central. According to the Price Theory of Monies, unification of analysis of tangible monies with analysis of non-monetary goods can only occur if everything is evaluated relative to an intangible-ratio-money: A Relative Measure of Value. Physical sciences depend upon abstract measurement units, such as inch, meter, gram, ounce, etc. Abstract relative-measure metrics are essential for science in that they permit comparisons among tangible things. Economics should become a physical science, with an abstract measure of value (ir\$) and also focus upon inventory accumulations.

Accountants define "wealth" as assets (owned) minus liabilities (owed). Liabilities are claims on assets (i.e. debts). The Price Theory of Monies recognizes monies as components of wealth, along with other assets such as homes, automobiles, furniture, clothing, and retirement plans. The Unified Theory of Prices focuses upon production, deterioration and accumulation of assets over time. Wealth and wealth distribution over time, including monetary components, ought to occupy center stage in economic analysis. In other words, economic analysis must focus on history in order to become a physical science.

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No More Blood for Oil. How Could EU Help?

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Abstract. The continuing cold war due to oil (its politicization and the profound military involvement), subsequently, the re-grouping of nations based on ideology was inter-changed with re-alignment among producers and transit states either in alliance with Russia as resource broker versus the umbrella group of American and Western conglomerates. Fuel conflict in current parlance – as nations of limited resources must secure supply at all cost (part of national security); EU, in particular, in jittery over Russian supply cut-off wants to partly replace with Caspian and Middle East oil transiting via the Mediterranean, Black Sea and Indian Ocean. Second, as nations of bountiful reserves are in competition to dominate world energy trade and the intention to manage market demand; in particular, petro-state Russia shall sustain supplier status or energy card (supply, transport, distribution) to reassert regional power after Cold War defeat. Third, powers' volition to secure enormous supply to establish leadership among worldwide energy buyers (indirect hegemony), America, in particular, struggled for supply security and pursued unilateralism – to sustain her 'informal empire' on finance, control of raw materials and international trade; hence, the control of the world energy spigot and transit routes which entail solid alliance among re-transit and consuming states, i.e. Qatar, Saudi Arabia, Iraq, Israel, Georgia, Ukraine rallying under American flag aspired to weaken Russian fuel business.

Keywords: EU Energy Policy, EU-Russia Relations, US Unilateralism (energy factor), Energy and Russia Resurgence, Russia and Central Asia

Нет нефти ценой крови. Как Евросоюз может помочь?

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Аннотация. Продолжающаяся холодная война из-за нефти (ее политизация и явная военная вовлеченность) и последующая перегруппировка государств, базирующихся ранее на идеологии, изменились вместе с переориентацией производителей и транзитных стран или на Россию как ресурсного брокера, или на зонтичную группу американских и европейских конгломератов. Топливный конфликт в нынешней терминологии заключается в том, что страны с убогой ресурсной базой стремятся к обеспечению себя во что бы ни стало (как частью национальной безопасности). В то же время, в особенности ЕС, опасаясь сокращения добычи нефти в России, пытается обеспечить себя частично каспийской и ближневосточной нефтью через Средиземное море, Черное море и Индийский океан. Во-вторых, страны с обильными запасами нефти в борьбе за мировой рынок конкурируют с Россией, старающейся восстановить свой региональный статус после поражения в холодной войне. В-третьих, США в своих имперских стремлениях остаются лидером среди покупателей (косвенная гегемония) ведут борьбу за безопасность поставок и свою исключительность, с желанием остаться «неформальной империей» финансового рынка, осуществлять контроль натуральных ресурсов и потоков международной торговли.

Ключевые слова: энергетическая политика Евросоюза; отношения ЕС – Россия; американский односторонний подход (энергетический фактор); энергия и российское возрождение; Россия и Центральная Азия.

INTRODUCTION

The study of how EU could help transform the fate of oil and eventually world destiny as oil became a factor in international crisis since the dawn of 20th century. The argument if glass is half-full or half empty, similarly, to analyze EU hysteria over reduced or temporary cessation of Russian gas supply, or is it Russia that is afraid of losing EU as its main customer?

ECSC task was to eliminate the fear over Germany coal and steel; hence, the policy of pacifism or sink deeply in an attempt to get rid of Russia in the framework of Western energy game. From offensive neo-realism to constructivism, EU should cater with the resource holder aims and fears for what spark petro state aggression was the deep desire to avoid the economic fate of the USSR and the aspiration to be recognized/respected power; second, address EU misperceptions towards Russia as her main supplier while addressing supply sustainability; third, check on American unilateralism motivated to cut-off Russia as energy power.

Underneath Russia's struggle is the pursuit of national economic interests or Gazprom's business interests through economic partnership with the West, especially energy ties with the EU having no other well developed resources/industry to offer. Hence, enhanced EU-Russo relations to work collectively in difficult areas (Arctic, Russia), therewith to attain other goals — secure fuel availability through valid contracts and entice Russia to join oil regime towards better investment law; ease the pain in times of price collapse, i.e. measures to manage loss of fuel income; lead the transition from petro state to the rise of other industry.

The pursuit of oil utilitarianism as with Silk Road and consortium investment in transoceanic internet cable system, Russian oil is not worth killing anymore, instead to fulfill energy security, in effect, check both U.S. unilateralism and Russia policy of avenging humiliation after Cold War defeat. In working with supply disruptions, arrange with Russia that could cover her economic and political interests; there was an adjustment in East-West relations during the Cold War — the West secured supplies as Siberian fuel base was built using Japanese/Western technology and scientific know-how; in the process, it helped Western economy in times of recession in 1970s, provided market for huge pipelines (steel), and economy

multiplier effect as gas equipment-services were created. As decade long sales contract and payment through buy-back was initiated, other business deals followed — joint manufacturing, equity participation, sub-contacting, turn-key delivery to factories, granting of licenses or large orders of industrial goods.

Section I discusses oil vis-à-vis international relations; section II, EU energy situation; section III, deals on how EU as an actor to help lessen conflict of interest, secure stable supply through stabilize relations with Russia, and check on United States unilateralism.

I. OIL POLITICS

Natural resources laid the foundation of a progressive civilization, however, the struggle to obtain, its trading and utilization changed the course of world history — as international corporations held great economic power and political influence, subsequently, the ascendance of colonialism which impacted traditional society, dragging their government which influenced international relations including great power rivalry¹. Similarly, the value of oil as it empowered machines invented during the Industrial Revolution, later, trade complexities evoking power and wealth, defining the nation's economy and the

¹ The influence of natural resources relative to international politics — at first, simple buy and sell business by local traders but were overtaken by stronger powers, to illustrate — African gold was originally traded by travelling Moors, however, Portuguese wanted said trading rights to pay for the purchase of Asian spices, and so followed Portugal colonization of West Africa. From economic presence to political imperialism — to secure Africa's cheap and abundant raw materials such as copper, cotton, rubber, palm oil, cocoa, diamonds, tin which were not available in Europe but needed to sustain her industries and the availability of human slaves to cultivate Americas/Caribbean cotton, tobacco, sugar plantations, eventually, by 1914, 90 percent of African continent was under Portugal, Britain, Germany, France, Italy, Belgium, Spain control, only Ethiopia and Liberia remained independent. Imperial governments were increasingly involved to protect and sustain the interests of commercial associations, if not, assumed direct command over trading privileges which followed tensions, i.e. Anglo-French rivalry which was solved through partition of Africa. On the other hand, real or perceived rival power encroachment led to local wars and its underlying impact upon international relations, i.e. Boer War, Moroccan Crisis, etc. and also continental economic restructuring, for instance railway proposals by France from Algeria to Morocco and Britain from Cape to Cairo. Vide: John M. MacKenzie, *The Partition of Africa, 1880–1900 and European Imperialism in the Nineteenth Century* (Kentucky, USA: Routledge, 1983) pp. 11–13; “Scramble for Africa” in *Wikipedia* (last modified December 14, 2015) https://en.wikipedia.org/wiki/Scramble_for_Africa (Accessed January 2, 2016).

direction of her foreign policy for both producers and consumers. In this millennium, the escalating complexities of geopolitics in the drive to secure petroleum categorized under national security² or “access to energy resources may become an object of large-scale armed struggle is almost incontestably the single most alarming prospect facing the international system today”³, and the militarization of international energy commerce to ensure transport security which called forth “the protection of the entire chain through which supplies move from initial production down to the final consumer”⁴.

Oil wars shattered post-Cold War peace — Iraq invasion of Kuwait, Georgia (the first Russia-USA proxy war), Afghanistan, Syria;⁵ however, *pax* petroleum is not impossible or the wisdom to transform world destiny by converting oil from war

² In an effort to sustain oil overflow despite the tempest of current international situations, so led to the militarization of energy resource management in three forms — “infrastructure and asset protection — physical protection of refineries, pipelines, loading facilities, offshore fields, and sea lines of communications; regime protection, or military support for governments that facilitate the export of their country’s oil reserves to foreign markets; and access assurance, or military moves intended to ensure uninterrupted access to key oil producing regions, such as the Persian Gulf.” Quote: Mikael Klare, “Petroleum Anxiety and Militarization” in *Energy Security and Global Politics: The Militarization of Resource Management*, Daniel Moran and James A. Russell, eds. (New York: Routledge, 2009), p. 47.

³ Daniel Moran and James A. Russell, “Introduction: The Militarization of Energy Security” in *Energy Security and Global Politics: The Militarization of Resource Management*, Daniel Moran and James A. Russell, eds. (New York: Routledge, 2009), p. 2.

⁴ Daniel Yergin, *The Quest: Energy, Security, and the Remaking of the Modern World*, (Penguin Books, 2012), p. 280.

⁵ The oil factor — Syria as transit for Qatar-Syria-Turkey gas pipeline combining hydrocarbons from Qatar, Israel, North Africa, Caspian, Caucasus, Kurdistan, then link-up with Libyan gas and extend the pipeline to Cyprus-Greece or Crete-Turkey as endpoint; a friendly Afghan government to facilitate the control and marketing of Caspian supply as well as secure by-pass export route being the gateway to the Indian Ocean and Arabian Sea, if America foregoes Afghanistan, then Iran and Turkmenistan would gain a space to maneuver and render useless the best exit for Caspian fuel that it could secure, Turkmenistan-Afghanistan-Pakistan pipeline. Vide: Taylor McCamy, “Talking Points on the Trans-Afghanistan Pipeline”, <https://moraloutrage.wordpress.com/2010/04/25/talking-points-on-the-trans-afghanistan-pipeline/> (Accessed February 27, 2015); Fox Hunte, “The Geo-Strategical Importance of Afghanistan” (Oct 23 2001) <http://everything2.com/title/The+geo-strategical+importance+of+Afghanistan> (Accessed February 24, 2015); “Israel Targets Energy Superpower Status”, in *Energy Tribune* (March 30, 2011), <http://www.energytribune.com/7283/israel-targets-energy-superpower-status#sthash.2RWp11qa.szFPXnpU.dpuf> (April 21, 2015).

to peace. The calls for pacifism wherein hostile intentions are eliminated — towards cooperation, harmony, positive human relations or international disputes over oil market/business peacefully resolved⁶, and the pursuit of utilitarianism, oil simply a commodity to be traded rather than an adjunct factor of Russian *revanche* and American unilateralism⁷.

⁶ Scholars identified two types of peace — “negative peace and positive peace: negative peace is the absence of violence or war while positive peace encompasses cooperative, tranquil, and harmonious relations and the broader concerns of human flourishing and integration. Quote: “Pacifism” in *The Stanford Encyclopedia of Philosophy* (substantive revision August 14, 2014) <https://plato.stanford.edu/entries/pacifism/> (Accessed February 15, 2017).

⁷ President Clinton crusade for globalization, in reality, “the globalization of American power, consolidated through American banking and finance and corporate power”; President Bush, Jr. advocated Project for the New American Century emphasizing America unique responsibility to preserve and extend an international order that would reinforce her security, prosperity, principles or global hegemony through enhanced military capabilities, leadership in the international organizations (NATO, IMF, United Nations, etc.), sustain U. S. Dollars as the world dominant currency, above all, prevent the rise of another power which may challenge American dominance. Juxtaposing PNAC ideology, America shall ensure a stable global oil market (availability of enormous fuel) and its smooth business — “no seller or group of sellers can dominate the market and thereby threaten the access of the US or its allies to purchase the supplies of oil needed to conduct normal everyday consumer business and military operations.” In pursuance thereof, America shall consolidate dominant position in the post-Soviet environment to preserve US/Western access to oil regions’ and gain new reserves to ameliorate US energy dependence in the Persian Gulf; curtail the leverage of existing mammoth producers (i.e. Russia and Iran) as well as strengthen relations with Turkey and the former Soviet Republics. Thus, the United States moved on to consolidate control over world energy spigot as well as the transport route and infrastructures, eliminate competitors and safeguard the area politically-militarily through direct hegemony/surrogate powers under the aegis of ‘War on Terror’, ‘Arab Spring’, ‘Color Revolution’, military operation in Kosovo, civil war in Syria and so effectuate regime change in Afghanistan, Iraq, Libya, Egypt, Ukraine, Kyrgyzstan, Georgia, furthermore, Kurdistan and Kosovo emerged as independent states. Quote 1: Engdahl, William. *Century of War: Anglo-American Oil Politics and the New World Order* (London, GB: Pluto Press, 2004), p. 224; Quote 2: Amy Myers Jaffe and R Soligo “Energy Security the Russian Connection” in *Energy Security and Global Politics: The Militarization of Resource Management*, Daniel Moran and James A. Russell (Abingdon: Routledge, 2009), p. 112; Vide: Adeyinka Makinde, “Vladimir Putin and the Patterns of Global Power” in *Global Research* (November 02, 2015) http://www.globalresearch.ca/vladimir-putin-and-the-patterns-of-global-power/5486083?utm_campaign=magnet&utm_source=article_page&utm_medium=related_articles (Accessed March 30, 2016); “The Project For A New American Century!” in “The 11th Hour” http://www.11th-hour.info/Articles/Project_for_a_New_American_Century.html (Accessed March 28, 2016); M. Sussex, “Strategic Security and Russian Resource Diplomacy”, in *Russia and Its Near Neighbours: Identity, Interests and*

II. EU OIL-GAS SITUATION

EU is an oil-gas importer through and through as oil proven reserves merely at 1 percent, 2 percent for natural gas, 4 percent coal which could not sustain the huge consumption of 28 heavy industrialized states⁸. It is projected that EU shall import two-thirds of energy consumption by year 2020⁹, or recent import data — “53% of the energy it consumes, including almost 90% of its crude oil, 66% of its natural gas and 42% of its solid fuels such as coal... [and] heavily dependent on one single supplier, namely Russia, responsible for a third of oil imports, 39% of gas and 29% of solid fuels. Six EU countries depend on Russia as the supplier for their entire gas imports.”¹⁰ Theoretically, EU supply is well secured as “80 percent of the world’s proven natural gas reserves fall within conceivable pipeline distance”¹¹ or the presence of multiple suppliers at each geographical angle — Russia to Central/East Europe wherein 39 percent of gas supply was obtained in year 2013; Norway to West Europe at 34 percent; Algeria to South Europe at 13 percent; Qatar 7; Libya and Nigeria, 2 percent

Foreign Policy, Maria Raquel Freire and Roger E. Kanet, eds. (New York: Palgrave Macmillan, 2012), p. 212.

⁸ EU-28 Main Trading Partners of Petroleum Oil, Crude, NLG (2013).

	Value	Net Mass		Value	Net Mass
Russia	33%	34%	Azerbaijan	5%	4%
Norway	11%	11%	Iraq	3%	4%
Nigeria	9%	8%	Angola	3%	3%
Saudi Arabia	8%	8%	Mexico	2%	2%
Kazakhstan	7%	6%	Egypt, Kuwait, Equatorial Guinea	1% each	1% each
Libya	6%	6%			
Algeria	5%	5%			

Chart: Eurostat, Extra-EU28 imports of petroleum oil, crude and NLG, main trading partners, 2013. May 28, 2014 http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Extra-EU28_imports_of_petroleum_oil_crude_and_NLG_main_trading_partners_2013.png#filehistory (Accessed October 14, 2015).

⁹ Brenda Shaffer, *Energy Politics* (University of Pennsylvania Press, 2011), p. 129.

¹⁰ The EU’s Energy Dependence: Facts and Figures” (July 24, 2014) <http://www.europarl.europa.eu/news/en/news-room/content/20140718STO53032/html/The-EU%27s-energy-dependence-facts-and-figures> (Accessed October 10, 2015).

¹¹ Robert Winchester, “European Energy Security Wrestling the Russian Bear for Caspian Natural Gas” in Program Research Project submitted to U. S. Army War College (June 30, 2007) <http://www.dtic.mil/get-tr-doc/pdf?AD=ADA471533> (Accessed July 4, 2014).

each¹². Hence, what concerns EU is not supply availability or source per se, but relations among suppliers, notably, Russia her main gas supplier;¹³ interchangeably, West Europe is Gazprom main market taking 82 percent or 130.052 bcm (billion cubic metre) of total export in 2015, of which 28.508 bcm (18 percent) was delivered to East and Central European states¹⁴.

Although no fault of their own, EU Members has been the indirect victim of numerous supply disruptions and there was no other way to immediately replenish the shortfall;¹⁵ in concern over future incidents and extreme dependence

¹² Eurostat, “Extra-EU28 imports of natural gas (liquefied, gaseous state), main trading partners, 2013” (May 28, 2014) [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Extra-EU28_imports_of_natural_gas_\(liquefied_gaseous_state\)_main_trading_partners_2013.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Extra-EU28_imports_of_natural_gas_(liquefied_gaseous_state)_main_trading_partners_2013.png) (Accessed October 14, 2015).

¹³ The legality governing EU-Russia energy relations: PCA (1997), EU-Russia Energy Dialogue (2000), and Four Common Spaces (2003), but, reaching an agreement seems difficult — in contrast with other buyers, China for instance, their main goal is merely to obtain hydrocarbons, EU include other issues such as environment, market openness, transportation and investment conditions; a cumbersome process which is difficult for Russia to adjust and fit with EU aspiration for supply security. Second, the presence of multiple actors such as the Commission, EU member states, the EIB, the EBRD, European and Russian energy companies; third, EU took ECT as the main concrete pillar of its external energy policy and as the key platform to institutionalize energy relations with the widest variety of third parties which Russia is not keen to participate. *Ibid*, Geo-politics of the Euro-Asia energy nexus, pp. 54, 55.

¹⁴ “Gazprom Export Delivery Statistics” <http://www.gazprom-export.ru/en/statistics/> (Accessed April 24, 2016).

¹⁵ Background of supply disruptions — producers were at war or undergoing national crisis, i.e. 1956 Suez Canal, 1967 Six Day War, 1979 Iranian Revolution, Iran-Iraq War; infrastructural weakness such as lack of supply storage (flow stopped from ex-Soviet Republics); 1973 Arab deliberate oil embargo to attain political objectives at the international level. Arab embargo deeply embedded consuming nations’ psyche or pushed nations to be concerned with energy security, thus, the strategy of “stockpiling of crude oil in cases of emergency and disruption; coordination on sharing oil supply; pursuing policies of energy conservation, promoting efficiency measures, monitoring and analyzing the oil market; increased transparency in the oil market data; and, more recently, engaging in constructive dialogue with oil producers.” EEC countries would have not been affected in the Arab-Israel conflict had they exhibited neutrality for Arab embargo was a retribution over West Europe deep attachment with United States foreign policy; hence, energy security could be attained if the marketing of resources was transacted purely under commercial manner by the producers and consumers refrained from political involvement. Quote: Ibrahim Mazlum, *Twenty First Century Energy Security Debates: Opportunities and Constraints for Turkey*, in Guney, Nursin Atesoglu, ed. *Contentious Issues of Security and the Future of Turkey*, (Abingdon, Oxon, GBR: Ashgate Publishing Group, 2007), p.136; Vide: Amy Myers Jaffe and Ronald Soligo, *Energy Security: The Russian Connection in Energy Security and Global Politics*, p. 129.

on Russian fuel, EU adopted the strategy of “diversifying energy sources and suppliers, cutting back on energy consumption, boosting energy production and cooperation between countries and investing in renewables.”¹⁶

III. PAX-PETROLEUM, HOW COULD EU HELP ATTAIN THIS GOAL?

Wrong decision, wrong policy, wrong alliance — again the world in delusion of fighting a just war; the burden of its legacy would impact generations to come, why not then the wisdom to end this treacherous and nonsensical cycle of energy war? Per EU option to reduce ‘over-dependence’¹⁷ and America motivation to cut-off Russia as energy power, consequently, “Russia’s

¹⁶ “The EU’s Energy Dependence: Facts and Figures” (July 24, 2014) <http://www.europarl.europa.eu/news/en/news-room/content/20140718STO53032/html/The-EU%27s-energy-dependence-facts-and-figures> (Accessed October 10, 2015).

¹⁷ To follow through, the European Commission adopted three core policies — first, the plan to increase LNG consumption from 8.9 to 31.8 percent by year 2030 and construct re-gasification facilities by 221 billion capacity m³; implement a coordinated EU policy that no national government shall negotiate with another party over energy supplies, purchases, and consumption. Second, undertook EU framework in institutionalizing multi-lateral cooperation with energy suppliers, transit states, consuming countries that are increasingly dependent on energy imports like China and India; to call upon Common Foreign and Security Policy (one of her pillars) in integrating energy into broader external relations such as market liberalization, dispute settlement, crisis response mechanism, international agreements to boost investment environment wherein European companies could win long-term business contracts. Third, the construction of infrastructural supply systems commissioned as Southern Gas corridor, Mediterranean Energy Ring, North Sea and North West Offshore Grid, North-South Interconnection (interconnect Central, South East Europe, Baltic region); accordingly, Germany-Italy-Poland-Czech Republic and Slovakia-Hungary interconnectors; four pipelines to transport Norway gas; Southern Corridor Gas Pipeline or Azerbaijan-Turkey oil/gas pipelines were inaugurated. Under review: a) LNG terminal in Greece; b) Interconnectors: Galsi (Algeria-Italy- France, Sardinia-Corsica) and Azerbaijan-Georgia- Romania Interconnector; Poland-Lithuania-Serbia; Finland- Estonia; Germany-Denmark-Sweden; c) Pipelines: Nabucco, Trans-Saharan (Nigeria-Algeria gas), Trans-Adriatic (Caspian-Turkey-Greece); Copenhagen-Poland Baltic Pipe; Mid-Nordic Gas Pipeline (Norway-Finland). Vide: Tekin, Ali, Paul Andrew Williams. *Geo-politics of the Euro-Asia Energy Nexus* (Basingstoke: Palgrave Macmillan, 2011), pp. 26, 42, 43, 46; Ian Traynor and Arthur Neslen, “Ambitious EU Blueprint for Energy Union to Loosen Russian Grip on Gas” in *Guardian News* (February 24, 2015) <http://www.theguardian.com/world/2015/feb/24/eu-blueprint-energy-union-russian-gas-gazprom-maros-sefcovic> (Accessed February 27, 2016) “EU Energy Markets in 2014”, Luxembourg: Publications Office of the European Union, 2014 http://ec.europa.eu/energy/sites/ener/files/documents/2014_energy_market_en_0.pdf (Accessed April 27, 2016).

pursuit of alternate partnerships and forums has been a result of its disappointment with the West and the feeling that it has not been accorded due respect as a result of US unilateralism and European neglect.”¹⁸ It is imprudent for the West to restrain Russia for Europe is the destination of more than 90 percent of her gas export; “in this case, the non-Western nations beginning with Russia will continue to act in defiance by unilaterally asserting what they see as their strategic and economic interests. In the absence of sufficiently strong international institutions, such interaction is likely to facilitate new conflicts, not peace and stability in the world.”¹⁹

Denying Russia the right to pursue its energy interests and to establish an independent energy policy at home and in Eurasia is sure to come with large political and economic costs... A prolonged cycle of hostilities shaped by clashing American and Russian perceptions of each other’s energy intentions, resulting in...energy security dilemma and...the militarization of the global struggle over energy supplies. Economically...the isolation of prominent American companies from developing important energy fields and energy relations abroad²⁰.

The best that EU could do is to cater with the aims and fears of the resource holder; in the crusade to reduce energy conflict, EU shall take Russia as a valuable partner, wherein Russia need not fight back to defend her market by knocking-out EU unified energy policy²¹ and in-

¹⁸ Kristi Govella and Vinod Aggarwal, eds. “Russian Foreign Policy: Challenging the Western Liberal International Order?” (Springer, 2012), p. 134.

¹⁹ Andrei P. Tsygankov, “Russia in the Post-Western World: the End of Normalization Paradigm?” in *Post-Soviet Affairs*, Volume 25 Issue 4, October-December 2009 <http://china.tandfonline.com/doi/abs/10.2747/1060-586X.24.4.347?journalCode=rpsa20> (Accessed November 18, 2016).

²⁰ Andrei P. Tsygankov, “Russian Policy and Responses from the European Union and the United States” in *Responding to a Resurgent Russia*, p. 49.

²¹ To uphold herself as Europe absolute supplier held since Soviet era, Russia constructed new pipelines in cooperation with participating nations energy departments rather than expand/rehabilitate existing facilities, in effect, the direct transport from Russian fields which reduced extreme transit path dependence or eliminated the burden of third party delivery interruption which import dependent states feared most; forfeited FSU bargaining chip over selling price, transit fee, opportunity for gas theft and derailed payment; availability of alternative-spare pipeline as solution in case of full shut-down of Ukrainian system as old pipelines would self-destruct after decades of utilization, business conflict or war. Infrastructural system constructed under Putin — Bal-

tensify politicking to get on southern producers to balance export commitments vis-à-vis huge domestic consumption and over production of older fields²². Fuel trade as a tool to deepen economic relations wherein Russia must comply to sell voluminous quantity at agreed price, i.e. signing of a long term contract as Russo-Sino gas deal in 2016, and an opportunity to promote interdependence wherein a negotiated agreement would convince Russia to accept an open and accommodating investment environment which could accelerate the development of her fuel in-

tic Pipeline System (2012) shipping oil to Europe by tankers navigating Ust-Luga canal and so reduced volume shipped via Druzhba; Blue Stream (2003) which reduced gas shipment via Ukraine system to Turkey or pipeline account “for over a half of the total gas volume (26.7 billion cubic meters) exported by Gazprom to Turkey in 2013”; Nord Stream (2012) which delivered 1 Tcf gas annually mainly to Germany or 24% transit reduction via Ukraine (48.7 bcm in 2011). The prospect of building Nord Stream II per September 2015 agreement, then, Europe dependence on Russian gas supply would increase to 80 percent or 60 percent for Germany and the enhanced reliance on Russian route. Quote: LNG World News «blue-stream-delivers-100-bcm-of-gas-to-turkey <http://www.lngworldnews.com/blue-stream-delivers-100-bcm-of-gas-to-turkey/> (Accessed February 24, 2017); Vide: Manfred Hafner, “Russian Strategy on Infrastructure and Gas Flows to Europe”, in POLINARES working paper n. 73, (December 2012), http://www.polinares.eu/docs/d5-1/polinares_wp5_chapter5_2.pdf (Accessed December 20, 2014); “Gazprom to Open Nord Stream-2 by 2020” in RT.News (June 26, 2015) <https://www.rt.com/business/269923-gazprom-miller-russia-gas/> (October 10, 2015); Elizabeth Corner, “Nord Stream II Looks to Hire Contractors” in Palladian Publications Ltd. (October 19, 2015). <https://www.energyglobal.com/pipelines/project-news/19102015/nord-stream-ii-looks-to-hire-contractors> (Accessed December 19, 2015); Silvestar Matejak, “Nord Stream 2-New Gas Pipeline from Russia to Europe” in e-metallicus (September 9, 2015) <http://e-metallicus.com/en/news/eu/nord-stream-2-new-gas-pipeline-from-russia-to-europe.html> (October 10, 2015); “The Baltic Pipeline System” in Администрации Ленинградской области <http://eng.lenobl.ru/economics/investment/principlefederalprojects/Balticoilpipeline> (Accessed December 10, 2014).

²² Per Russia’s situation, the need for external assistance to raised fuel production, subsequently, export capability. The “giant fields” of Yamburg, Urengoy, and Medvezh’ye, which currently account for more than 60 percent of total Russian production, have started to decline. Production at Zapolyarnoye, a fourth giant field that came on stream in 2001, has recently reached its peak... [Exploration and production] e&p costs for developing fields on the arctic Yamal Peninsula and on the Ob-Taz shelf will amount to \$25 billion, and yet another \$40 billion in pipeline infrastructure to connect these fields to the existing system...\$17 billion per year through 2030 [needed] in e&p projects and in the maintenance of current fields in order to meet domestic demand and to fulfill export commitments. Quote: Andreas Goldthau, “Resurgent Russia? Rethinking Energy Inc.” in Hoover Institution Policy Review (January 29, 2008) <http://www.hoover.org/research/resurgent-russia-rethinking-energy-inc> (Accessed March 24, 2016).

dustry²³. To acknowledge Russia’s precious role or the availability of Russian oil to minimize the impact of supply interruptions, i.e. war, terrorism, political instability, resource nationalism, ethnic/sectarian strife, underinvestment, closure of navigational routes.

[Time now to]... abandon the logic that any other behaviour on Russia’s part as a threat to the West, as a sign of authoritarianism, of an ‘energy war’, that the ‘Russians are coming’ and so on. The starting point for a genuine dialogue must be the recognition that each party has its own interests. These interests do not always coincide (between supplier and consumer this is natural), but that certainly does not mean that they are mutually exclusive and insurmountable. On the contrary, they are naturally complementary²⁴.

Whenever business gas dispute unfurled and as transit states obstructed fuel supply, automatically, third party consumers considered it as Russia “energy weapon”²⁵. In working with

²³ Gawdat Bahgat, “Energy Security: An Interdisciplinary Approach” (U.K.: Wiley, 2011) p. 173.

²⁴ Konstantin Kosachev, “Do we have a shared future in energy?” in “Pipelines, Politics, and Power: The Future of EU-Russia Energy Relations” in CER2016. <http://www.cer.org.uk/publications/archive/report/2008/pipelines-politics-and-power-future-eu-russia-energy-relations> (Accessed June 15, 2011) p. 49.

²⁵ Ex-republics pipelines needed by Russia to transport to Europe: a) Moldova, 25 bcm flows to Moldova and Southern Europe (Bulgaria, Greece, Macedonia, Romania, Western Turkey, Slovakia); cut-off on summer/winter of 1999–2000 and January 2006 for 16 days due to domestic upheaval as gas must pass through Transnistria Republic main trunk lines before reaching Moldova proper. b) Ukraine, 80 percent of Russian gas, 14–17 percent of her oil, and small quantities of Central Asian gas transit through Ukraine five gas trunk lines Brotherhood (Bratstvo), Orenburg (Soyuz), Urengoy Center, Yamburg (Progress), Northern Lights (Siyaniye Severa); fuel cut-off concurred in 1992, 1993 1994, January 2006, January 2009, June 2014. c) Belarus, Northern Lights and Yamal-Europe pipelines to deliver gas to Belarus Poland, Baltic States, Kaliningrad enclave (Russia), Frankfurt Germany, the Netherlands, Belgium; Druzhba transports 30 percent of Russian oil at a total of 40 million tons annually, of which 400,000 barrels per day delivered to Poland, Germany at 350,000 b/d, and the rest to Ukraine, Slovakia, Czech Republic, Hungary. Oil non-shipment concurred from January 9–11, 2007 and gas for eighteen hours on February 2004. Vide: Pirani, Simon, ed. Russian and CIS gas Markets and their Impact on Europe (Oxford Institute for Energy Studies, 2009), pp. 98, 109, 110; Nadejda Victor and David Victor, “Bypassing Ukraine” in Victor, David, Amy Jaffer, and Mark Hage, eds. Natural Gas and Geopolitics from 1970–2040 (Cambridge University press 2006), p. 131; Dellecker, Adrian and Thomas Gomart, ed. Russian Energy Security and Foreign Policy Brothers to Neighbours (Routledge, 2011), p. 193, 232; Natalia Shapovalova, “Ukraine: Lynchpin for European Energy Security”, in Fundación para las Relaciones Internacionales y

Russia, EU should well analyze supply threat or energy weapon exist only as perception rather than an objective reality; to consider instead, what to do over extreme dependence balancing Russian interests for the prosperity of both economies²⁶. Behind supply cut-off was business profit maximization or selling price hike resulted to non-affordability²⁷, accordingly, non-payment, impacted delivery to other buyers as transit states siphoned gas for their constituents and was not Russia's intention, in fact, in the early stages of supply disruption, Russia wanted to get hold of the earlier Soviet energy system so as to contain continual disruption.

After heavily subsidizing its former Soviet allies throughout the past 15 years, Gazprom has increased gas prices in CIS countries and pushed to equalize prices net of transit fees with those it charges its West European clients... In case an affected country is unable to pay the new price, Gazprom accepts in-kind payments, including shares of national or regional gas providers or pipeline grids — assets it would otherwise have to buy as an integral part of its expansion strategy²⁸.

el Diálogo Exterior (July 2008) http://fride.org/download/DB_Ukraine_UE_Lynchpin_ENG_agu_08.pdf (Accessed June 4, 2011).

²⁶ In reality, EU had the upper hand — “Poland imports nearly all its gas from Russia, this accounts for less than 8 percent of total primary energy consumption (which is overwhelmingly dominated by coal). Germany has long had a ‘special’ relationship with Moscow, yet Russian gas comprises less than 10 percent of its primary energy consumption.” Second, Europe has an advantage over Russia, having numerous oil refineries or “a country with a seaport equipped with an oil refinery can enjoy a continuous supply of refined oil. If the pipeline route leading to a refinery is cut, in theory it can always buy crude from tankers.” Quote 1: Bobo Lo, *Axis of convenience: Moscow, Beijing and the New Geopolitics* (Washington, DC, USA: Brookings Institution Press, 2008) p. 150; Quote 2: Anita Orbán, *Power, Energy, and the New Russian Imperialism* (Praeger, 2008), p. 83.

²⁷ Like any other corporation, the concern for profit to survive and there is no other way for Gazprom to do so but to turn to foreign buyers or extreme dependence on profit from West European sales to compensate for losses by subsidizing domestic market as obligated by law. “More than two-thirds of Russia's annually produced 600 bcm is already used in households, industry, transport, heating, and power plants... domestic Russian gas prices are only a fraction of prices charged on foreign markets, amounting to only 17 percent of West European gas prices in 2006–29 percent when taking into account transit charges.” Quote: Andreas Goldthau, “Resurgent Russia? Rethinking Energy Inc.” in Hoover Institution Policy Review (January 29, 2008) <http://www.hoover.org/research/resurgent-russia-rethinking-energy-inc> (Accessed March 24, 2016).

²⁸ Andreas Goldthau, “Resurgent Russia? Rethinking Energy Inc.” in Hoover Institution Policy Review (January 29, 2008) <http://www.hoover.org/research/resurgent-russia-rethinking-energy-inc> (Accessed March 24, 2016).

In line of fire, EU actual concern should have been how to avail gas uninterruptedly for buyers who would pay; instead, EU solution was “system-building activities such as the dimensioning of Western Europe's underground gas storage facilities, its efforts to build interconnecting pipelines with alternative gas suppliers, and its overall ambitions to diversify supply.”²⁹ In a sense, a noble purpose but wrong decision as potential suppliers/transit states may not be able to supply gas for a long term in a stable manner — how could Georgia rise as a major transport corridor for Caspian Sea/Central Asia producers and Turkey as re-transit route to Europe with so many uncertainties, i.e. politically unstable, Russia military bases are stationed in Abkhazia and South Ossetia, Kurdish insurgency, the unresolved Caspian Sea status and Caucasus frozen conflict (Nargono Karabakh).

Second, the realization that it is utterly nonsensical for Russia to attempt, intend or actualize the denial of gas supply, in fact, Russia proposed or built new pipelines to get rid of third party dilemma³⁰. Once pipeline has been constructed and gas delivery began and so buyer-seller ties is held in tight; business-wise, it is necessary to sustain huge sales to recuperate early on billions of investment for “the cost of natural gas is a function of the distance between the consumer and the extraction site: the longer the distance, the higher the costs of natural gas”³¹ In reality, it is Russia that needed EU as sales market and investment capital source in critical areas such

²⁹ H. M. Røgselius, *Per. Red Gas: Russia and The Origins of European Energy Dependence* (New York: Palgrave Macmillan, 2013), p. 221.

³⁰ Moscow another approach was to control the supply through joint ventures, equity ownership in the downstream sector with major national energy infrastructure companies, accordingly, Gazprom purchased Topenergy in 1998 (Bulgarian distribution company); Gaz de France allowed Gazprom direct access to France retail gas market; Gazprom invested \$2.6 billion in 23 big ventures in 2004 such as 50 percent stake in Solvrusgaz (Slovakia), 48 percent Eruopol Gaz (Poland), 30.6 percent Eesti Gaas in Estonia. Vide: Gal Luft and Anne Korin, *Energy Security Challenges for the 21st Century: A Reference Handbook* (Praeger Security International, 2009), pp. 93, 94; Kirsten Wesphal, *Germany and the EU-Russia Energy Dialogue* in Parni Aalto, ed. *EU-Russia Energy Dialogue: Europe's Future Energy Security* (Abingdon Oxon, GBR: Ashgate Publishing group, 2007), p. 101; Robert Winchester, “European Energy Security Wrestling the Russian Bear for Caspian Natural Gas” in Program Research Project submitted to U. S. Army War College (June 30, 2007) <http://www.dtic.mil/get-tr-doc/pdf?AD=ADA471533> (Accessed July 4, 2014).

³¹ Anita Orbán, *Power, Energy, and the New Russian Imperialism*, p. 83.

as offshore drilling and LNG, logically speaking, why would Russia freeze supply to existing buyers (EU) while trying to gain new markets, i.e. Turkey and China? No one wants supply disruption as buyers want supply commitment from producers, while producers does not want to lower demand/sales volume due to the high cost of investment, market development, etc. Therefore, EU in jittery over supply withdrawal is untenable as producers or petro-state depend on oil income through and through critically needed for social, economic, political stability or the most classic example is the continued oil flow from Islamic Iran despite professed anti-Western regime.

Third, EU could well manage energy security based on historical experience — Egypt and Israel peace accord as concerns for supply of water and energy resources were addressed; similarly, EU could establish an energy regime under her auspices — among its task is to help European conglomerates gain Russian business or play a significant role in oil/gas explorations; manage Ukraine energy system such that Russian gas would not disrupt other end consumers nor would Russia has the reason to engage on economic and political machinations among weaker ex-republics³². On the other hand, Russian VIOCs controlled 95 percent of

³² Theoretically, if Russia lost Azerbaijan, Kazakhstan, Uzbekistan, Turkmenistan resources to competitors and if Georgia gained considerable momentum over transit route, consequently the forfeiture of her southern European fuel market dominance and diminish her regional influence. The rivalry over Caspian is “a zero-sum game in which US advances would come at Russian expense. So the completion of the BTC probably hardened Russian resolve to continue its support for Armenia and separatist regions in Georgia, in a bid to block US strategic projection into the region.” Russia must block Armenia as transit route to Turkey, otherwise, it would render redundant Russian northern Caucasus route along with planned southern Europe pipelines; the control of Central Asian deposits — prevent producers from becoming international competitors or exclude international conglomerates equity ownership and retain maximum control over transport infrastructure or exclusive position in the transit of hydrocarbons so as not reduce Russia’s competitiveness in the world market. Quote: Peter Rutland, “US Energy Policy and the Former Soviet Union: Parallel Tracks” in *Our Energy Policy* <http://www.ourenergy-policy.org/wp-content/uploads/2013/08/US-energy-policy-towards-Russia.pdf> (Accessed August 9, 2015); vide: Michael Klare, *Rising Powers, Shrinking Planet: The New Geopolitics of Energy* (Oneworld Publications, 2008) pp. 75, 76; T.S. Eder, *China-Russia Relations in Central Asia* (Springer Fachmedien Wiesbaden, 2014) pp. 46, 66; Vladimir Likhachev, “The Role of Energy in Russia’s Relations with Turkey and Iran” in paper presented for The Economic Policy Research Foundation of Turkey Ankara, International Workshop “The Turkey, Russia, Iran Nexus: Economic and Energy Dimensions” (March 29, 2012), p. 3.

crude production and 80 percent refining or only 25 percent oil production and 16 percent refining capacity is under state controlled companies;³³ basically, private companies would find loopholes vis-à-vis government policies detrimental to their business interests being heavily dependent on global market to keep afloat, neither would Russian government harm their endeavors as it would be a hard task to regain consuming states trust and confidence to re-purchase after cut-off.

In sum, per the criteria of supply security, it is best for EU to enhance Russian level of participation rather than her alienation³⁴ for “there will not be any sufficiently strong competitor to take Russia’s place as an essential energy supplier of the EU, at least in the short term”³⁵, anyhow, nations accounted as potential producers or transit states may not be best competent to exchange Russian oil. EU needed to find a middle ground that Russia would withdraw as a major spoiler of Western policies in Eurasia and beyond; EU has no choice but to choose partnership being technically dependent on Russia as supplier within proximity and in difficulty to attain a unified energy policy³⁶ as “big Western customers such as Germany, Italy, and

³³ Andreas Goldthau, “Resurgent Russia? Rethinking Energy Inc.” in Hoover Institution Policy Review (January 29, 2008) <http://www.hoover.org/research/resurgent-russia-rethinking-energy-inc> (Accessed March 24, 2016).

³⁴ The contradictions — Russia viewed EU as a way to integrate into the developed world, as investment source, trade and aid; on the other hand, EU is considered as a rival power and a destabilizing factor over issues such as democracy and human rights. Javier Morales, “Russia as an Energy Great Power: Consequences for EU Energy Security” in *Energy Security Visions from Asia and Europe*, Antonio Marquina, ed. (New York: Palgrave MacMillan, 2008), p. 29.

³⁵ Dimitrios Triantaphyllou and Yannis Tsantoulis, *Russia in EU and US Foreign Policy: The Energy Security Dimension*, in *European Security in Transition*, Hause, Gunther, and Kernic, Franz, eds. (Abingdon, Oxon, GBR: Ashgate Publishing Group, 2006) p. 286.

³⁶ EU general policies deterred states as outcome may have negative impact upon respective national interests or disagreement over distribution of benefits as nations that face higher risk would ask for more benefits; energy is considered as part of national security such that states sought to conclude bilateral agreements based on geopolitical conditions, energy mixes, and relations with suppliers rather than complicate matters by following with EU; Members are reluctant to transfer jurisdiction to the complicated and slow wheels of EU structural tier and various institutions. Thus, Member States signed bilateral agreements and negotiated pipeline projects such as Nord Stream and South Stream, projects not between EU and Russia but direct negotiation between Germany, Bulgaria, Turkey, along with their interest to play the role as Russia’s main hub. Vide: Tekin, Ali, Paul Andrew Williams, *Geo-politics of the Euro-Asia Energy Nexus*, pp. 25, 27, 28, 30, 31, 35, 36.

France are in a position to strike bilateral deals with Moscow, while Eastern states, particularly the most vulnerable ones [being highly dependent] such as Bulgaria, the Baltic States Slovakia, and Hungary, plead for EU-wide solidarity³⁷.”

The prospect for peace as the perception of marketing war was abated — EU should help develop the economy of other continent such that market would be divided among suppliers, simply not to grab for one piece of bone taking Europe and advanced Asian economies as customers;³⁸

³⁷ Gawdat Bahgat, “Energy Security: An Interdisciplinary Approach”, p. 167.

³⁸ What would follow if Russia suffers economic downturn due to the loss of energy business — would the world witness the rise of ultra-nationalist or pro-communist group? Communist China was given Most Favored Nation status and so was able to contribute positively during 2008 financial crisis; so why not the same for Russia’s behest, for instance, a gentleman agreement with America to leave European market for EU to tackle with? If America could convince Saudi Arabia to trade oil in U.S. Dollars (Petrodollars) in exchange for protecting the House of Saud, why EU could do not do similar quid pro quo?

the West should assist Russia to develop her other industries and not to be extremely dependent on fuel economy alone, and self-help for Russia — diversify the economy in considering the perils of petro state or resource revenue is not dependable nor the high value of oil is everlasting³⁹.

³⁹ We may not foresee the defining moments of civilization and progress per the direction to reduce carbon dioxide with another energy source (renewable energy), substituting the century old method of using oil-gas to power machines. Future scenario – By 2035, electric cars could make up 35 percent of the vehicle market, and could account for two-thirds of that market by 2050...[thus] displace 25 million barrels of oil per day...[and] solar power could account for 23 percent of global electricity-generation capacity by 2040, and 29 percent by 2050. Under that scenario, coal would be entirely phased out, while natural gas would account for just 1 percent of the generating mix...about 2 million barrels a day will be displaced by 2025, equivalent to the amount of oversupply that triggered the price crash... Quote: Stephen Edelman, The Christian Science Monitor, Why fossil-fuel giants underestimate electric cars, renewable energy <http://www.csmonitor.com/Business/In-Gear/2017/0213/Why-fossil-fuel-giants-underestimate-electric-cars-renewable-energy> (Accessed February 14, 2017).

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“Brexit”: What to Expect?

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Abstract. The question of the exit of Britain from the membership of the European Union has become widely discussed for the last two years, because the leading and developing countries are interested in this issue from both political and economical sides. The purpose of the given work is the analysis of probable economic consequences of “Brexit” for Britain and also for Asian countries, such as China and Japan. The result of the work is the conclusion that Britain has stumbled on the duality in problem solving of the exit from the European Union; we can find drawbacks and advantages in all searching spheres of this topic. Economic measurements collapsed after the day of referendum and it is unknown what else the British economy and the whole world economy can expect after the exit the country from the European Union. The main tool of my research was the informational agency Bloomberg, which has the huge amount of data on this subject.

Keywords: “Brexit”; British economy; referendum; trade barriers and duties; inflation rate; currency quotations; yuan.

Брексит: что следует ожидать?

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Аннотация. Последние два года вопрос выхода Великобритании из состава Европейского союза стал широко обсуждаемым, так как интересует с политической и экономической сторон как лидирующие, так и развивающиеся страны. Целью данной работы является анализ возможных экономических последствий Брексита для Великобритании, а также стран Азии, таких как Япония и Китай. Результатом работы стал вывод о том, что Великобритания столкнулась с некой двойственностью решения вопроса выхода из состава Европейского союза, по каждой сфере исследования мы можем найти плюсы и минусы Брексита для Великобритании. Экономические показатели Великобритании потерпели коллапс после народного голосования, и неизвестно, что еще ожидает британскую и мировую экономику после выхода страны из Евросоюза. Основным инструментом исследования послужило информационное агентство Bloomberg, которое содержит большой массив данных по данной тематике.

Ключевые слова: Брексит; экономика Великобритании; референдум; торговые барьеры и пошлины; уровень инфляции; валютные котировки; юань.

To begin with, the word “Brexit” comes from the shorthand way of saying that the United Kingdom is going to leave the European Union.

Euro skeptical moods in United Kingdom were strong even when Single Europe did not exist. But there is the difference in opinion among the British population. David Cameron supports preserving membership in the EU: in his opinion, it is a question of an economic safety and economy and it is not the good idea to refuse the single market constituting a quarter of world economy. Previous British Prime-minister David Cameron shares his point of view in one interview: *“The isolationism policy never did well to our country. When we turned a back to Europe, we were sorry about it sooner or later. If we leave the EU, then we will take a step to uncertainty”*.

It is obvious that “Brexit” is considered to be the catastrophe for all European Union: against the background of migratory crisis and economic problems it is awfully to allow losing of such global financial center as Great Britain. Great Britain has such kind of problem duality dealing with the question of exiting the EU in terms of membership contribution, migration, economic stability and trading balance. [1]

Judging be membership contribution, on the one hand, the profit on access to European Single Market considerably exceeds expenses on membership in the European Union. The EU provides to Britain return of investments in an approximate size 10:1. The annual contribution of Great Britain to the European budget is equal to 340 pounds sterling from a family and growth of trade, investments and reduction of prices pays back this contribution at the rate of 3000 pounds a year on a family, thanks to membership in the European Union. However, on the other hand, Britain will be able to cease sending billions of pounds annually to Brussels and instead of this to begin to spend them for own needs, such as health care, education and scientific research. European membership costs to the British business more than 600 million pounds sterling a week.

Immigration is useful thing for the economy as the European migrants make a net contribution to the budget of Great Britain — in general, they pay more taxes, than receive governmental benefits. And it is the good argument to remain in the EU. But Great Britain would like to return the complete control over the borders leading to decrease

in number of migrants. It will create expanded employment possibilities for the British workers. However, as soon as Britain breaks off the relations with the EU, France will cease to constrain migrants in Calais. Now there are from 3 to 4 thousand illegal immigrants in Calais from the countries of Africa and Asia.

Membership in the European Union does the British economy stronger. The EU supports business of Great Britain, creates workplaces and provides lower prices for consumers. If Britain leaves the EU, investments will fall and millions of people will lose work as global manufacturers will transfer the transactions to more profitable member countries of the European Union. According to calculations of Confederation of the British industry, an exit of Great Britain from structure of the EU will cost the United Kingdom 100 billion pounds sterling; it is about 5% of GDP of the country, and reducing 950 thousand workplaces by 2020. The budget will lose 45 billion euros tax revenues (that is equivalent to 7% of the VAT).

Additionally, the European Union is the number one trading partner for UK. Great Britain participates in the European commercial transactions with more than 50 countries worldwide and gets profit with more advantageous conditions that are connected with membership in the European Union. Exit from the EU will create large risks as trade barriers and duties will be entered. Trade with the EU, certainly, will continue. Britain can achieve free trade with the European Union, without being at the same time obliged to observe the European laws. Great Britain will be able to benefit from freedom of own trade agreements with other countries, in particular with quickly growing export market of China and India. [1]

However, despite of advantages and disadvantages of Brexit, the most British people voted for leaving the European Union, the votes were divided as 51.9% for to leave and 48.1% for to remain on the referendum which took place in June 23, 2016. The possibility of exiting the European Union is described in Article 50 of Treaty of Lisbon. As for the latest news, Teresa May send official letter to the European Council with the statement of final decision of leaving the EU in March 29, 2017. So, the process of “Brexit” has started.

The rate of the British pound currency quotations dropped against the American dollar by 10% (as it is shown on Figure 1), having decreased from a mark 1.5 to 1.32 — such fall was not even during

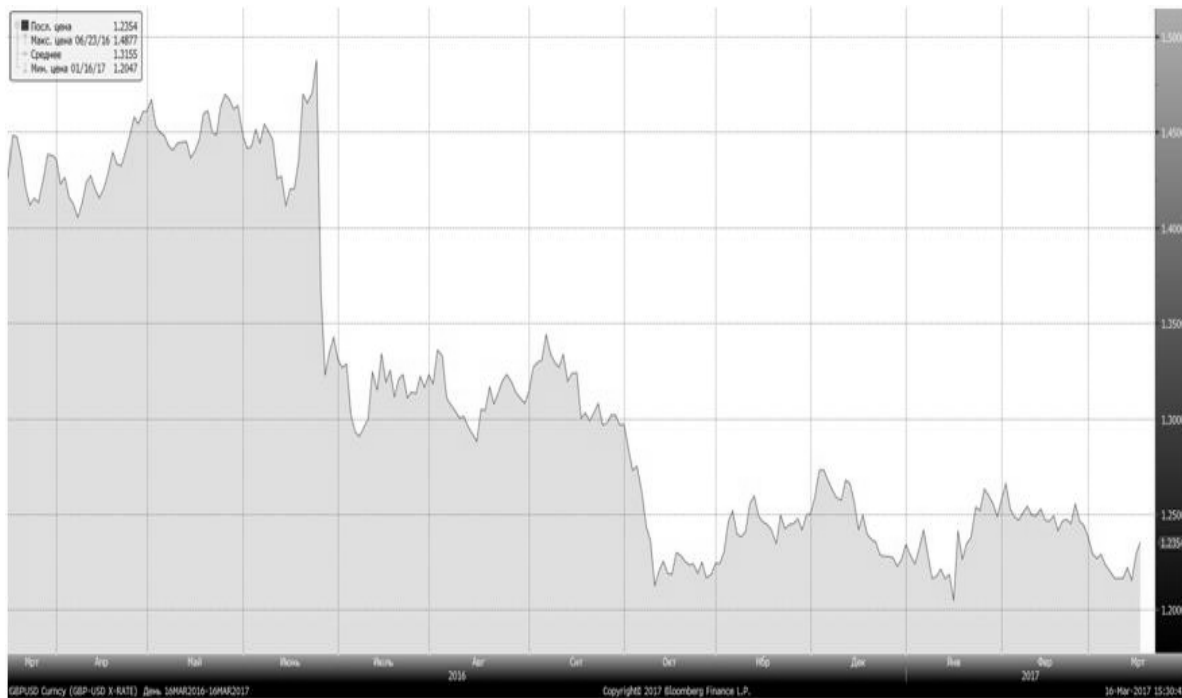


Figure 1. Pound slumping the day after the referendum (GBPUSD)

Source: Bloomberg Information Service.

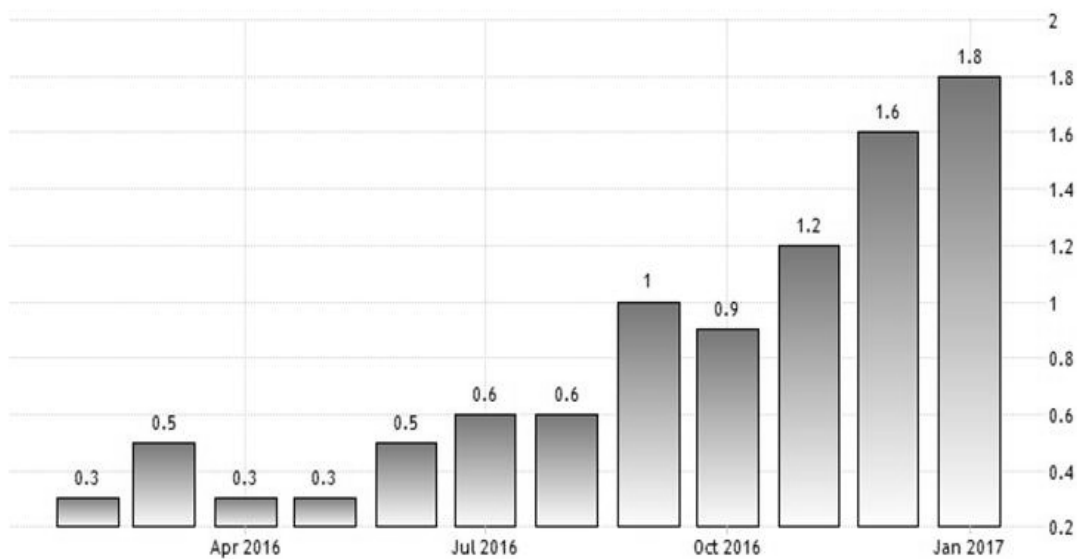


Figure 2. Inflation rising due to the currency depreciation

Source: tradingeconomics.com.

the global financial crisis. The British pound sterling for the first time since March 2009 fell below a mark of 1.4 dollars for pound.

The next economic indicator which was suffered by referendum is the inflation rate. In September 2016, the index of annual consumer price inflation raised to 1%. The changes are shown on Figure 2. It is the highest jump of inflation in the last two years. In comparison with August 2016, goods and services rose in price for 0.4%. Most of all the prices of clothes, fuel and the real estate grew.

The September 2016 jump of inflation demonstrates that the prices will grow even more because of the collapse of pound sterling. According to forecasts of the Bank of England, inflation next year will exceed a target indicator in 2%. On this background, delay of economic growth is predicted. [2, p.9]

“Brexit” provoked sharp decrease in the European stock markets. News about a victory of supporters of “Brexit” rendered strong depressive effect on the European stock markets. The Eurostoxx50 index decreased by 8.5%. The Frankfurt exchange



Figure 3. Chinese yuan versus pound sterling (GBPCNH)

Source: Bloomberg Information Service.

was closed with loss in 6.82%, Parisian exchange market lost 8.04%. The London exchange opened with falling results almost of 7%.

Shares of the British banks, such as Barclays, Lloyds, suffered the greatest losses. Following the results of the next day after referendum of their loss constituted from 15 to 18%.

Asia also reacted on “Brexit” by falling of the main quotations. The Japanese Nikkei dropped more than by 8%, it is the most essential recession after an earthquake and a tsunami which were in 2011 brought to 10% fall of the markets. Great Britain risks of losing the Japanese investors become higher after Brexit. The most part of the Japanese financial institutions and companies, including Nissan Motor Co, chose Great Britain as the European headquarters. Nearly a half of investments of Japan into the EU last year went to Great Britain.

China, as one of the leading and rapidly developing Asia countries, has quite dangerous position in terms of exchange rate, that is why it is important to evaluate the influence of “Brexit” on Chinese economy. Why is Beijing afraid of an exit of Great Britain from the EU? [1]

London is the key place in the strategy of Beijing on a gain for yuan of the status of world currency. It is the leading international financial center located

in the EU. A gain for yuan of the status of world currency is one of the most important purposes of the Chinese government. The gain yuan of the status of world currency will allow China to set the tone in the world financial sphere. The collapse of yuan is described in Figure 3.

The exit of Great Britain from the European Union will become serious strike against China both economically and politically. China hopes to influence on the EU policy by means of the more close relations with Great Britain. Also Great Britain gave the opportunity to enter the huge European market to China. Many Chinese companies consider the British economy as rather easy to invest therefore more important for China became the strategy of investment into Europe. Need to mention, that in case of Brexit Great Britain will cut off an exit to China to the market of the EU.

In conclusion, I would like to provide the quote of the President of the Russian Federation about the “Brexit” referendum: “The referendum will have consequences for Britain, for Europe and, of course, for Russia. And if the referendum organization and the following results which have already taken place nowadays are the self-confidence and thoughtless relation to important issues not only for their own country but for the whole Europe, then consequences will have the global character.”

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Understanding How Value Added Tax (VAT) is Applied in the Democratic Republic of Congo

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Abstract. This article discusses the tax reform in the DRC with respect to value added tax, which has replaced the sales tax, otherwise known as turnover tax. The author highlights the advantages and disadvantages of VAT from the point of view of different opinions.

Keywords: value added tax; sales tax.

Вопросы применения НДС в Демократической Республике Конго

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Аннотация. В статье представлены результаты налоговой реформы в Демократической Республике Конго с учетом введения НДС вместо налога с продаж. Автор рассмотрел выгоды и недостатки от введения НДС на фоне различных мнений по этому вопросу.

Ключевые слова: НДС; налог с продаж.

From a theoretical point of view, the main objective of the tax system through the introduction of taxes is to provide revenue to the State to finance public expenditure by avoiding the use of inflationary financing. It is therefore important that the tax system generate revenue growth without the need for frequent changes in tax rates or the creation of new taxes.

On the other hand, in a world undergoing rapid change and liberalization, most countries, including the Democratic Republic of the Congo, have embarked on actions to widen the various components of their fiscal space. Thus, with a view to increasing the level of their tax revenues and reducing tax distortions due inter alia to fraud, invasion and multiple exemptions, they have implemented tax reforms and modernized the tax administration, with the introduction of value

added tax, of which the latter constitutes a major element of the reform.

VALUE ADDED TAX [VAT] IN THE DEMOCRATIC REPUBLIC OF CONGO [DRC]: DEVELOPMENT AND RATE

Almost unknown in 1960, the value added tax (VAT) is now found in more than 130 countries, raises around 20 percent of the world's tax revenue¹, and has been the centerpiece of tax reform in many developing countries including the Democratic Republic of Congo.

VAT (*Taxe sur la valeur ajoutée* — TVA) is a consumption tax paid on certain goods and services purchased in the Democratic Republic of Congo

¹ Michael Keen and Ben Lockwood, *The Value Added Tax: Its Causes and Consequences*, May, 2007.

(DRC) and is included in the sale price of these goods and services.

In August 2010, The President of the Republic signed a decree replacing the sales tax “Impôt sur le chiffre d’Affaires” (ICA) with a value-added tax (VAT), which was introduced on January 1, 2012².

The standard rate of value added tax in the DRC is 16 percent.

THE VAT POPULARITY VS UNPOPULARITY DISCOURSE IN THE DRC

In the DRC, the value added tax (VAT) is imposed on all types of general consumption. In other words, the VAT applies to all supplies of goods and services and importation of goods and services.

VAT is popular for some reasons as compared to sales tax.

In practice, VAT is likely to generate more revenue for government than sales tax since it is administered on various stages on the production — distribution chain. With sales tax, if final sales are not covered by the tax system e.g. due to difficulty of covering all the retailers, particular commodities may not yield any tax. However, with VAT some revenue would have been collected through taxation of earlier transactions, even if final retailers evade the tax net.

There is also in-built pressure for compliance and auditing under VAT since it will be in the interest of all who pay taxes to ensure that their eligibility for tax credits can be demonstrated. VAT is also a fairer tax than sales tax as it minimizes or eliminates the problem of tax cascading, which often occurs with sales tax. These are facilitated by the fact that VAT operates through a credit system so that tax is only applied on value added at each stage in the production-distribution chain.

At each intermediate stage, credit will be given for taxes paid on purchases to set against taxes due on sales. Only at consumption, stage where there are no further transactions will there be no tax credits.

Lack of input credit facility in sales tax often results in tax on inputs becoming a cost to busi-

nesses, which are often passed on to consumers. Sales tax is often applied again to the sales tax element of the cost, thus there is a problem of tax on tax. This is not the case with VAT, which makes it a neutral tax as it provides the least disturbance to patterns of production and the generation and use of income.

In addition, the audit trail that exists under the VAT system makes it a more effective tax in administration terms than sales tax as it helps with the verification of VAT amounts declared as due. This is made possible by the fact that one person’s output is another’s input. As with sales tax, imports are treated the same way as local goods while exports are zero-rated to avoid anti-export bias.

There is also another major advantage of value added tax is that under this system all traders are dealt equally. Well applied, it also involves minimum distortionary effects on economic activities. Could this be the case in the DRC?

Fears and unpopularity of VAT in the DRC

Notwithstanding the advantages mentioned above, it is worth noting that VAT is a considerably complex tax to administer compared with sales tax. With the size of the DRC and the lack of infrastructures, it may be difficult to apply to some companies and other informal businesses due to difficulties of record keeping and its coverage in some areas and services sector may be limited.

Since the application of the VAT in DRC dated 1st January 2012, the equity impact of the relatively high rates have been a cause for concern as it is possible that the poor spend relatively high proportions of their incomes on goods subject to VAT. In this regard, one could affirm that related to income VAT is therefore regressive.

This is true as when someone with an income of 100 buys a basket of goods on which a VAT of 16 is levied, 16% of his/her income goes to VAT. If someone with an income of 1000 buys, the same basket the percentage of income going to VAT is only 1.6%.

As demonstrated, a uniform VAT rate on all goods and services is regressive when related to income and there is need to think how to reduce rates in the DRC in order to decrease the regressive effect of VAT on income. To reduce this regressively we can suggest introducing the dual rate system in the DRC. With that, goods and services

² Ordonnance — loi n° 10/001 du 20 août 2010 portant institution de la taxe sur la valeur ajoutée.

that are relatively important for the lower income categories should be subjected to a reduced VAT rate. Therefore, there is a certain basket of goods and services subjected to a standard VAT rate and a basket subjected to a reduced rate.

THE VAT HIGHLIGHTS IN THE DRC

In fact, for the first time, VAT has been introduced to the DRC. Since the 1st January 2012, value added tax, has replaced the old sales tax, known as ICA.

Taxable transactions — VAT applies as from February 2012.

VAT is levied on the supply of goods and services and on the importation of goods and services into the DRC.

Rates — 16%

Registration — Registration for is compulsory for all persons (business or individual) that are liable to tax.

Registration must take place within 15 days following commencement of a business.

Filing and payment — VAT returns and related payments are due by the 15th day of the following month.

PROBLEM OF THE APPLICATION OF THE TAX ON THE VALUE ADDED

The implementation of the tax on added value, 1st January 2012, occurred in an indescribable cacophony and caused overheating of prices of goods and services markets. Kinshasa within the country, you are in the situation of an airplane falling apart: crew (Government) manipulates the controls to try to straighten it out, but no maneuver is effective until then.

On the theoretical level, the tax system through the introduction of taxes and fees main purpose is to raise revenue for the State to fund public spending, avoiding him to have recourse to inflationary financing. It is important that the tax system produce an expansion of revenues without having to frequently change the tax rates or create new taxes.

Moreover, in a world in perpetual change and strongly advanced liberalization, most countries, including the Democratic Republic of the Congo, engaged in actions to expand the different components of fiscal space. Thus, in order to enhance the level of their tax revenue and reduce tax distortions, among other things, fraud, invasion and multiple exemptions granted; they have implemented tax reforms

and modernized the administration of the tax, with the introduction of the tax on the added value, the latter constitutes a major element of the reform.

The value added tax (VAT) is part of the tax reform that the country launched there a decade ago, either from 2002 to 2012. The value added tax is a tax that is based on the set of final domestic consumption and not on the intermediate consumption (this is to avoid the accumulation of tax at the various stages of production and distribution) or on exports, and it must also be independent of the origin of the products (foreign or domestic)³.

In the Democratic Republic of Congo, faced the difficulty to mobilize direct taxes, and in the face of the pressure exerted by economic operators, the Congolese authorities were brought to abandon the tax on the turnover (ICA) to the benefit of the value added tax and excise duty. Taxes deemed economically more neutral than the tax on the turnover considered more prohibitive and whose negative impact on the investment and the economic development of the country remain proven.

In addition, given the low level of the staff with paid work nearly 5 million, according to the Government, a relatively easy direct taxation is possible, coupled with a limited number of undertakings on which income tax is concentrated, opposed to employers in the informal sector (yet some are largely above the thresholds of taxation and who manage to evade tax on profits and other largely which they owe).

The Congolese authorities, due to multiple constraints and difficulties of application of direct taxes, have been forced to use, on the one hand, direct taxation based on the introduction of the tax the tax on income of individuals and corporations. And on the other hand, indirect tax by the replacement of the tax on the turnover by the tax on the value added.

Indeed, according to the tax administration, the indirect tax reform aims, among others:

i. to substantially increase the level of tax revenues. However, it should be noted that this increase is possible only by making companies, persons or physical, to a real tax system. This scheme is based on the apprehension of the actual accounting stream. According to G. Chambras⁴, it is a necessary

³ Tayaye Fafay, Handbook of science and technology tax, CRIGED, Kinshasa, 2005.

⁴ Chambras (G), Tax and development in sub-Saharan Africa, Economica, Paris, 1994.

condition for the VAT liability, liability which is for the State to entrust the collection of VAT subject taxpayers. It should be noted, however, that this does not mean that the State can get, by tax, unlimited resources. Because too great a tax burden harms the effectiveness of the system by encouraging fraud and evasion and distorting the structure of relative prices in the economy. Which is to say, to be efficient, a tax system or a tax it must have less impact on prices related and must therefore leave unchanged the allocation of resources. In practice, efficiency means you will be charged tax on a plate as wide as possible and quite low and uniform rates. Which will enhance the fairness, because in this case, the tax has been perceived in a manner fair and equitable;

ii. to attract investment and boost domestic production. This second objective is only possible if the total or even partial VAT application does not lead to taxing producers but rather, as is also its purpose, to tax only the final consumption; to drain the informal activities into the formal sector. Contrary to the tax authorities, the application of VAT does not lead automatically and necessarily to a drainage of informal activities into the sector structured. Where, it seems, for our part, that the taxation of the informal activities should not be done by the application of VAT but rather by the implementation of a synthetic patent index, which the amount would be determined on the basis of objective indicia of the level of activity, without reference to the turnover. The selected indexes should be simple, small and easy to locate. The simplicity of this patent would facilitate comprehension by taxpayers and should be considered as part of a tax provincial or local, as is also the constitution. In addition, the low economic result of informal activities, their number, their dispersion on the national territory as well as their inability to keep accounts would make it irrational to affect expensive administrative means to mobilize direct taxes from a low amount per unit. Moreover, through their purchases of inputs, equipment and various inputs, activities or small informal businesses productions or even marketing, can bear the VAT that strain their purchases permanently. The VAT, which would correspond to the added value of these micro-enterprises or activities, would not be collected but it would make little sense, we believe, to consider to involve the shortfall, because most of these informal activities are below

the threshold of liability and cannot in any case constitute reliable tax collectors and especially that in the majority of cases These activities are those of subsistence. Moreover, as stipulated in the enforcement of law No. 10/001 of August 20, 2010, to be taxable to VAT, the person must realize an annual turnover of at least 80 million Congolese Francs, or more than 85 thousand dollars. Except, on the one hand, members of the liberal professions which are taxable, regardless of the height of the turnover achieved annual and to imports which are taxable to VAT, regardless of the value of the imported goods.

iii. This reform will facilitate the harmonization of indirect taxation in the context of the sub-regional groupings.

In addition, by its vocation, VAT is applied by any physical or legal person who performs, independently and as expensive, deliveries of goods and the provision of services by acting as such. According to the provisions of the legislative order No. 10/001 of 20 August 2010; shall act independently, any person who operates under his own responsibility and enjoys complete freedom in the Organization and execution of the operations which it carries out. The law adds: is made for valuable consideration, any operation that involves the existence of a consideration, only whatever the nature or the aims or for-profit, profit or loss.

Of all the above, and pursuant to the principle of territoriality of VAT, it applies, first, on the operation of delivery of goods or any other operation to transfer at a third of the power to use a property as owner when the property in question is located on the national territory at the time of the sale. Then, VAT applies also on the real estate work, when they are carried out in the country. And finally, it applies in terms of the provision of services, when it is rendered, the transferred right the rental object is used or operated in the country.

In summary, the VAT is a general tax on consumption which strikes⁵:

- the supply of goods,
- the provision of services of any kind,
- deliveries of goods and services for oneself,
- imports and,
- exports.

⁵ Bifumanu Nsompi (D), The current DRC tax reforms, Luozi Academic Press, 2006.

PROCEDURE OF COLLECTION OF VAT

According to the procedure established by Parliament, the VAT is collected at every stage of the economic cycle (i.e., at the level of producer, wholesaler, the retailers, or the retailer) the taxable person physical or legal person who makes deliveries of goods or the provision of services for its customers and calculates, on this occasion, the VAT on the price of duty-free sales called output tax.

Moreover, if it is on the occasion of the purchases of the goods supplied or received benefits, suppliers demand the price, including VAT, called deductible VAT, at the end of the month, the taxable person total output tax and input tax and, if necessary, reverse the Net VAT.

At this stage, three situations can arise:

(i) the output tax is greater than input tax, the difference that emerges is the VAT to be paid to the State Treasury,

(ii) is, the output tax turns out to be lower than the deductible, in this case, it will be cleared a VAT credit. This VAT credit is charged to statements of the month or the following months until exhaustion or refund provided for by law. It should be noted a few exceptions related to the refund of VAT to a taxable person. The case of refund may be either on a company that loses its quality liable to pay, or cessation of activity or is still, to an exporter.

(iii) when the output tax is equal to the deductible VAT, no tax is payable. Although this tax is ideal for the DRC, its launch was chaotic.

LONG PREPARATION PROCESS BUT CHAOTIC LAUNCH

The process of implementation of the tax on added value, in the Democratic Republic of the Congo, has been long, ten years. Despite the duration that the process has taken, he is very curious and surprising if not sickening to see the chaotic implementation of this tax on January 1st of the current year.

Indeed, as indicated in the work of Professor Kola⁶, it is since 2002, more exactly since May 2003 that the Congolese authorities have implemented, within the General Tax Directorate, a "Commission of reflection" called "Project-VAT group" for the reform of indirect taxes for the substitution of the tax on the

turnover by value added tax. This Commission was responsible for the draft texts before giving birth to the tax on the value added to the Congo from January 2007.

At the end of the three years of intense work of reflection, or in 2006, the Commission presented a draft law on institution of the VAT in the Democratic Republic of the Congo.

In the same year, the Directorate General of taxes will transmit this draft, for possible critical and observations, at the University of Kinshasa, Lubumbashi, the higher Institute of commerce and the business world. A year later, a technical Committee of follow-up of the implementation of the VAT in the Democratic Republic of the Congo, under the direct authority of the Minister of finance will be. It was composed essentially of representatives of the Presidency of the Republic, the Prime Minister, the ministries and the world of business (represented by delegates from the FEC, ANEP and COPEMECO). The observations provided by the different delegates helped to significantly improve the draft. The year of 2009, a Bill will be tabled in Parliament.

At the end of the parliamentary review of the project, June 4, 2010, the Senate had conducted review and adoption at first reading. Two weeks later, is June 23, 2010, it was enacted the enabling Act of the Government to take the legislative order bearing institution of VAT. And a month after, on August 20, 2010, the president of the Republic had signed the order-law no 10/001 August 20, 2010, with imposition of VAT in the Democratic Republic of the Congo. At the end of the process, a draft ratification bill will be tabled in Parliament on January 14, 2011 and voted June 15, 2011 and finally consider the implementation of VAT on the 1st January 2012.

As we can all notice, it took a decade of reflection and procedures to finally launch the VAT. But alas, all this time did he to the extension or the awareness of public opinion to understand and be understood, what is VAT? And what is more beneficial than the tax on the turnover? The branch tax, in its communication plan and strategy awareness and launch joined only two axes. The first axis, the administrations and the ministries of finance, economy, services-oriented portfolio, etc. and the second turned to (indebted) economic operators through tax mornings and a few rare programs broadcast. Forgetting altogether, taxpayers are consumers (people) judged too "amnesia" to pronounce on crucial issues affecting their fate (sic). This strategy of the

⁶ Kola Guy, Tax law, course 1era Licence, Faculty of law, UNIKIN, 2005-2006.

Directorate-General of taxes has produced, actually, the result at which it was to be expected.

In comparison, how do not understand that the Central Bank of the Congo to launch the Congolese Franc, she took a year to information, awareness and training of the public. She has, in fact, similarly to sensitize public opinion to respect and good held its national currency.

The chaos created by the launch of the VAT, as if this event was away from the actions of some of us, defies the imagination! Fortunately, the Government has learned quickly retrieve the situation by specifying that:

- i. the application of VAT is allowed to persons meeting the criteria of coverage,
- ii. ban on any increase of prices exclusive of VAT without a change of one or several elements of cost,
- iii. the application of VAT to all the economic operators whose turnover is estimated at a minimum of 80 million francs previously registered to the Directorate-General of taxes and Congolese.
- iv. The temporarily exempt products listing, (milk, bread, and food for children, etc.). Besides, according to the VAT Act, exemptions are restrictive, of strict application and are of three types:
 - exemptions to social and cultural,
 - pure technical tax exemptions and
 - exemptions from sovereignty.

Thus, the liability of economic operators to the VAT assumed previously:

- (i) the subscription of the declaration of liability to VAT,
- (ii) the subscription to the monthly declaration of VAT, no later than the 15th of each month,
- (iii) held a regular accounting, and
- (iv) the issuance of invoices for all the operations performed, etc.

SOCIAL EFFECTS OF THE APPLICATION OF VAT

Although the objectives pursued by the Government in introducing the VAT are noble, that is,

to increase tax revenues by more than 40% to fund programs of reconstruction, modernization and social such as improving income of public servants of the State and the budget in health spending, education of the order of 2–5%, etc.; this legitimate concern for maximizing revenue should not overshadow, on the one hand, the social effects that the chaotic implementation of the VAT has been able to impose on the daily lives of the population and on the other hand, the promise of the authority to make his second term, the social.

Note for example the behavior of certain economic operators who characterized by disobedience and misapplication in the legislative order No. 10/001 August 20, 2010, with imposition of VAT in the Democratic Republic of the Congo; behavior characterized by concomitant application of the case (now deleted) and VAT tax in the sale price, causing a double taxation which caused a surge in prices, supported unfortunately by the Congolese consumer.

This misinterpretation of the law, on the part of the operators can be explained, all things being equal, by the weakness of the repressive regime, considered too lax, and by the failure of price control structures, likely to encourage the diversion of revenue from the application of the VAT to the benefit of economic operators and some corrupt State officials.

In conclusion, for a tax reform to be effective and accepted by taxpayers, it should engage, not only of the authorities and public administration, but also that of the economic operators as well as taxpayers who are affected by the reform. This allows to eradicate any reaction of rejection of the reform on the part of taxpayers and a special care for the management of the reform on the part of the authorities of the tax administration. To its success from the outset a coherent strategy by setting a schedule to follow and a total and comprehensive awareness-extension.

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The Monetary System of the Luso-Brazilian Empire: the Changing Role of the 'Provincial' Currency in the 17th and 18th Centuries*

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Abstract. In this research we try to explain the dual character of the monetary system of the Luso-Brazilian Empire brought about by the introduction of a parallel, or complementary, currency in Brazil by the end of the XVII century. The simultaneous circulation of 'provincial' and 'national' coins can explain why these units of exchange did not act as both store and standard of value. Money had not only a hierarchy character according the value of payments (gold, silver and copper) but also the mint policy varied in the different areas of circulation. This implied that not all these coins were hoarded or obtained the same status on international market. Nevertheless, since the 17th century we have an evolution that we need to recognize and understand. This implied that 'provincial' money as a concept had an evolution and other attributes to make this money broadly acceptable as units of exchange. Which are the convergence of mechanisms that explain the emergence and consolidation of a money economy in the Portuguese Empire? We will analyse the monetary relations between Brazil and Portugal and the time span is since the 17th century until the 19th century.

Keywords: Monetary system, provincial money, currency system, Luso-Brazilian Empire.

Монетарная система Португальско-Бразильской империи: меняющаяся роль «провинциальной» денежной системы в XVII и XVIII веках

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* This is a work in progress intended to assess the monetary arrangements within the Luso-Brazilian Empire in the 18th century. In a previous paper (Lima & Sousa, 2017), we estimated the production and stock of the national gold coins in Brazil in the period 1703–1807.

Аннотация. В этом исследовании мы попытались выяснить двойной характер монетарной системы Португальско-Бразильской империи, созданной путем введения в обращение параллельной и комплементарной валюты в конце XVII в. Одновременной циркуляцией «провинциальных» и «национальных» монет можно объяснить, почему они не выполняли функции и сокровища, и меры стоимости. Деньги имеют не только иерархическую структуру в зависимости от вида платежей (золото, серебро и медь), поэтому денежная политика различается в разных сферах циркуляции. Следовательно, не все монеты образовывали сокровище или получали такой же статус на международном рынке. Несмотря на это, с XVII в. произошла эволюция, которую мы должны осознать и понять. Это предполагает, что концепция «провинциальных» денег подлжет эволюции и приобретает другие качества, благодаря которым эти деньги беспрепятственно принимаются в качестве средства обмена. Каким был механизм конвергенции, благодаря которому возникла и укрепилась денежная экономика Португальской империи? Мы проанализировали денежные отношения между Бразилией и Португалией в промежутке времени от XVII до XIX в.

Ключевые слова: монетарная система; провинциальная денежная система; денежная система; Португальско-Бразильская империя.

INTRODUCTION

This paper analyses the main features of the monetary system of the Luso-Brazilian Empire from the end of the 17th century to the beginning of the 19th century with emphasis on the changing role played by the *provincial* coins, that is, a currency supposed to circulate exclusively in the colony. We start by describing the monetary arrangements in Portugal and Brazil in the last quarter of the 17th century and correspondingly discussing the rationale behind the introduction of the provincial currency. The following section examines the changes in currency circulation brought about by the gold discoveries which gave rise to a dual currency system composed of national and provincial coins that remained in place right until the end of the colonial period. The third section assesses the increase in the provincial money supply that occurred during the second half of the 18th century and speculates about the reasons the Crown decided to meet the demands then being made both by the colonists and by the colonial authorities. The final section presents a summary of the main arguments.

1. THE LUSO-BRAZILIAN CURRENCY SYSTEM IN THE LAST QUARTER OF THE 17TH CENTURY AND THE COINAGE OF PROVINCIAL COINS

Throughout the colonial period, the Luso-Brazilian monetary system was bimetallic. As elsewhere in Europe, circulation was based on silver in the 16th and 17th centuries. The gold discov-

eries of the 18th century, however, increased the share of gold as a means of exchange in Brazil, where metallic coins and gold in the form of dust and gold bars served as a means of payment alongside other non-metal commodities such as sugar and cotton¹. All commodity moneys had their values determined either by the local authorities or by the crown in terms of the Portuguese unit of account — *real*².

After its independence from Spain in 1640, Portugal and its American colony faced an increasing currency shortage due both to the high costs associated with the war of Restoration and, later on in the 17th century, to the steady fall in the international price of sugar and tobacco. The crown then resorted to a sequence of devaluations of its unit of account: from 1640 until 1688, it raised the mint price of silver on five occasions, and that of gold six times, with a total increase of 133% and 243% respectively³.

These devaluations applied to both the kingdom and the colony but in Brazil, under pressure from sugar producers, the colonial authorities occasionally decided to cry up the money in circulation without asking for prior approval

¹ Sugar was used in payments everywhere in Portuguese America, whereas cotton served as currency exclusively in the State of Maranhão and Pará until 1750. In the eighteenth century, gold dust and gold bars circulated in the mining regions, which comprised the captaincies of Minas, Goiás and Mato Grosso.

² Only gold dust was allowed to act as a unit of account but its usage was restricted to the mining regions. Even there, a substantial part of the contracts and government accountancy were still denominated in *réis* (plural of *real*).

³ Sousa (2001).

from Lisbon⁴. Another way of protecting the interests of the sugar industry involved fixing the *réis* price of an *arroba* (approximately 15 kilos) of sugar around the time the fleets arrived and then impose this as legal tender. Setting the price of sugar also sought to resolve potential conflicts between local producers and Portuguese merchants that might have jeopardized the sailing of the ships back to the kingdom at the appropriate time. This expedient was maintained through the 18th century even though sugar mill owners had by then lost most of the political leverage they had enjoyed over the two previous centuries⁵.

Despite these devaluations, the money stock deteriorated both in terms of quantity and of quality. Most of the coins were of Spanish origin and the scarcity of silver and gold species was aggravated by the practice of clipping. In such a case, new coins were bound either to be exported or hoarded in accordance with Gresham's law.

As from the mid-1680's, laws were enacted in efforts to impose a more uniform circulation, initially to no avail and even in the metropolis. Finally, the monetary law of August 1688 succeeded in imposing the monetary regime that was to last almost untouched until the beginning of the 19th century. The *real* lost 20% of its value and the recoinage of all silver coins and of old gold coins was ordered⁶. The bad quality and the currency scarcity together justified the measures undertaken by the Portuguese authorities. The 20% increase in the mint price of metals was meant to compensate their owners for the loss experienced due to the recoinage but was also motivated by a similar devaluation in Spain two years earlier.

The 1688 monetary law received strong opposition in Brazil, where the monetary situation resembled that prevailing in the kingdom: silver coins, mainly *patacas* from Spanish America, circulated with very low intrinsic value, and complaints about currency shortages. The recoinage of silver in particular would therefore represent a considerable loss to the colonists. In an attempt to prevent such a loss, both the colonists and the local authorities repeatedly

appealed to the king and requested the creation of a Mint House to coin "provincial" currency with either a higher face value or a lower metal content than the metropolitan coins. Up until 1694, when the king finally decided in favor of establishing the first Mint House in Brazil, there occurred a number of what became known as "currency riots" in Bahia and, in particular, in the captaincy of São Paulo.

Initially located in Bahia, then the capital of the colony, the Mint began operations in 1695 coining exclusively "provincial" silver and gold currency that weighed 10% less than their equivalent in the kingdom. In 1698, after finishing the recoinage in Bahia, the mint was transferred to Rio de Janeiro and, two years later, to Pernambuco, where it remained in operation until 1702⁷.

If one takes into consideration the correspondence exchanged between the local and the metropolitan authorities about the shortage of coins in Brazil during the last quarter of the 17th century, the total coinage produced by the so-called "Travelling Mint" must have come as a surprise. The nominal amount of provincial coins represented about 60% of the silver circulating in Portugal at the beginning of the 18th century, and 20% of the gold circulation. Although there are no reliable estimates for the total population, we may state that the supply of currency per capita in Brazil was higher than in Portugal⁸.

As a consequence of the recoinage, silver coins accounted for around two thirds of total circulation at the turn of the century. These silver and gold coins were made legal tender and with their exportation prohibited. No further coinage was planned as the amount of provincial currency in circulation was deemed more than sufficient. Cash payments for imports could be made with the Spanish patacas resulting from commercial relations with Buenos Aires⁹. Part of the silver provincial pieces fulfilled the important role of small change as very little copper coins were then in circulation and none had been minted in Brazil.

⁷ For this reason, the Mint has been referred to as the "Travelling Mint" in the literature. See Gonçalves (1984); Lima (2005).

⁸ For monetary data in Portugal, see Sousa (2006).

⁹ As far as the sugar producers were concerned, the ideal situation would be one in which Portuguese merchants would accept sugar as a means of exchange.

⁴ See Sombra (1939).

⁵ For a discussion on the changes in the balance of power in Brazil during the 18th century, see Fragoso (1998).

⁶ For details, see Sousa (2001).

2. THE IMPACT OF THE DISCOVERIES OF GOLD ON THE MONETARY SYSTEM

The exclusive circulation of provincial coins within the colony's boundaries did not last for as long as a decade and thus we are not able to properly assess its impact on the Brazilian economy¹⁰. In response to the gold discoveries in the Minas region, the Crown reopened the Mint in Rio de Janeiro in 1703, this time to coin only *national* gold coins, that is, coins similar to those produced by the Lisbon Mint. Whilst the coinage of provincial currency represented a longstanding aspiration of the colonists, the reopening of the Mint above all held fiscal objectives: the authorities sought to boost their collection of the fifth (*quinto*), that is, the 20% tax on gold production, plus 6.6% gains from seigniorage¹¹.

The new Mint in Rio de Janeiro was designed to meet private demand for coins due to be sent to Portugal. Most historians have supposed that almost all of these coins were indeed sent to Portugal, but recent research suggests that about 20% of the amount coined in Brazil remained in the colony, whether in circulation or hoarded¹².

As regards metallic money, two types of coins were produced, both by the Lisbon Mint and by the mints set up in Brazil: national gold coins, intended for circulation in Portugal, as well as provincial coins, made of gold, silver and copper, which were to serve as legal tender in the Portuguese American territory. Thus, in the case of colonial Brazil, not only was the system bimetallic, but it was also a system that had complementary coins in circulation.

The large-scale mining of gold in Brazil, beginning in the late 17th century, soon led to deep changes in coinage policy. The Rio de Janeiro Mint was reopened in 1703 followed by the Bahia Mint in 1714¹³. Furthermore, a third mint was established in Vila Rica in 1724¹⁴. The initial

plan was that the Brazil mints would only strike national coins with the same intrinsic and extrinsic values as those produced at the Lisbon Mint, intended as a means to prevent the smuggling of gold dust.

The production of gold and gold coins came to have a profound impact on the specie in circulation. What was designed to become a clear-cut system, with the provincial coins playing a significant, if not exclusive role at least insofar as domestic transactions were concerned, instead became a mixed monetary system, one in which both national gold coins and provincial silver and gold coins circulated side by side even if through different circuits. Moreover, two main reasons drove a significant decrease in the supply of provincial coins to the sugar production captaincies. The first was the perennial deficits that the coastal areas ran with the hinterland¹⁵. The second reason stemmed from the decoupling of the official and the market gold/silver ratios: the gold discoveries provoked a decrease in the market value of gold in terms of silver and, as a result of the fact that the Portuguese authorities did not change the mint price of gold accordingly¹⁶, bad money (gold) expelled good money (silver coins) from circulation¹⁷.

Complaints about currency shortages were stronger in the captaincies that did not have a mint. In Pernambuco, which was the most important sugar producer up until the Dutch invasion in 1630, the authorities were trying to persuade the crown to send them provincial coins at the beginning of the 18th century despite the relatively high level of coinage of its mint in 1701–2. A great deal of those requests was only for the sending of small change, but not exclusively. The circulation of provincial coins was deemed crucial to the production of sugar and other commodities¹⁸ as these coins were used to acquire local inputs. It is interesting to note, however, that even though these requests became particularly insistent in the 1720's and 1730's, in that period alone Pernambuco remitted around 3,000 contos of national

¹⁰ As pointed out by Levy (1983).

¹¹ Costa, Rocha & Sousa (2013); Lima & Sousa (2017). According to law, the miners had to take the gold dust to *casas de fundição* (smelting houses) that returned them as gold bars after deducting the 20% levy. The bars then could be taken to the Mint if their owners so wished. Most of the gold sent by individuals from Brazil to Portugal took the form of coins.

¹² See Lima & Sousa, 2017.

¹³ The Bahia Mint remained in operation until 1832 (see Gonçalves, 1984). The Rio de Janeiro Mint is nowadays the Brazilian Mint.

¹⁴ See Boxer (1962). The mint was closed ten years later.

¹⁵ Russell-Wood (1968).

¹⁶ The silver mint price was raised in 1734 and 1747. See Sousa (2006) for an analysis of the effects of such changes in Portugal.

¹⁷ See, for example, Russell-Wood (op. cit.), Pinto (1979) and Lima (2012).

¹⁸ Arquivo Histórico Ultramarino. AHU_ACL_CU_015, Cx.51, D. 4522.

Coinage of Provincial coins in the Lisbon Mint (1752–1805)

	Lisbon Mint (in contos)	%
Gold (1752–1796)	527	32
Silver (1755–1797)	666	41
Copper (1753–1805)	443	27
Total	1636	

Source: *Estatística das moedas de ouro, prata, cobre e bronze, que se cunharam na Casa da Moeda de Lisboa desde o 1º de Janeiro de 1752 até 31 de Dezembro de 1871.*

Note: 1 conto = 1 million réis.

gold coins to Lisbon¹⁹, a sum greater than the total coinage produced by the Travelling Mint.

Similarly, in Bahia, in as early as the first decade of the 18th century, colonists began complaining about specie scarcity²⁰ and, in the same fashion as in the 17th century, the local authorities perceived the shortage of money as a fiscal hindrance. After the successful French raid on Rio de Janeiro in 1711, the reopening of the Bahia mint was seen as a way to increase public revenues to pay for higher military expenditures. That the issuing of provincial coins provided the crown with higher gains from seigniorage raised the hopes that the mint would coin at least some provincial currency. To the disappointment of the colonists and the Bahia authorities, however, the new Bahia Mint, which began operations in 1714, produced only national gold coins until 1752²¹.

The main consequence of the shortage of silver therefore reflected in the lack of small change for daily transactions. Such shortages were felt most keenly in the northeastern region — Bahia and Pernambuco, in particular —, where silver coins had beforehand constituted the bulk of the species in circulation. As these coins disappeared, the colonists once again began requesting the coinage of provincial money, including copper coins. These requests came mostly from the sugar and tobacco producers, who required cash to pay for the inputs necessary to running their “factories” and who furthermore benefitted from the difference in metal terms between the national coins they received when exporting their produce and

the provincial coins needed to pay salaries and inputs domestically.

In summary, in the first decades of the 18th century, the monetary situation had already dramatically changed from that originally envisaged by the Law of 1694 in which provincial coins were due to dominate the currency in circulation. The scenario brought about by the production of gold coins in Brazil meant the concomitant circulation of two different kinds of currency: the *national* (gold) coins and the *provincial* (gold, silver and copper) coins that did not compete, but instead ran side by side.

3. THE INCREASING SUPPLY OF PROVINCIAL CURRENCY AND ITS REGIONAL DISTRIBUTION

Despite the appeals arriving from the colony and even following assent from the Overseas Council, the crown did not change its monetary policy. Neither the metropolitan nor the colonial mints issued any silver or gold provincial coins until the mid-18th century. Only small quantities of copper were sent to the mining regions in the early 1730's. Change did finally come about in the end of 1740's. Table 1 displays the total amounts of provincial currency produced in Lisbon and destined for Brazil.

Silver and gold coins were three quarter of the total amount sent to Brazil. The amounts of copper increased in the beginning of the 19th century, with huge amounts sent in 1802 and 1803. Lisbon ceased the coinage of provincial silver and gold coins in 1796–7. This decision probably derived from results of consultation made by the crown with the governors of the most important captaincies, asking them to report on both the quantity and the types of species in circulation. On that

¹⁹ ISEG-UTL <http://ghes.iseg.utl/index.htm?no=551000100094>.

²⁰ As amply demonstrated by Russell-Wood (op. cit.) and Pinto (op. cit.).

²¹ The mint also produced some copper coins in 1730.

occasion, no governor complained about money scarcity. Fiscal considerations might also explain the crown's decision to carry on producing provincial copper coins until 1805.

What were the reasons behind the change in the crown's policy with regard to the provision of provincial coins? Did they reflect a change in the way Lisbon perceived the relative importance of the colony — and the colonists — within the Empire? Or, alternatively, was this motivated primarily by fiscal considerations?

One hint may arise out of the geographical distribution of the newly issued provincial coins. A significant proportion of the coins was initially delivered to the State of Maranhão and Grão-Pará, an area of great concern for the crown due to the proximity of territories under dispute with Spain. The decision was first taken in 1748, which means that the change preceded the rise to power of the Marquis of Pombal. The State of Maranhão and Grão-Pará continued to be the destination of most of the provincial coins produced by the Lisbon Mint following the forming of the General Company of Grão-Pará and Maranhão in 1755²².

A second reason derived from the change in the monetary regime imposed specifically in the Minas region. In 1750, both the Rio de Janeiro and Bahia mints were ordered to coin silver, and to a lesser extent copper, designed to fulfill the role of small change in that region. To avoid smuggling, gold coins of any sort were prohibited from circulation and thus gold dust became the preferred means of payment. However, because the *oitava* (3.585 grams) of gold, valued at 1\$500 réis, served as the unit of account, petty payments had to be made with even smaller fractions. As a result, throughout the 18th century, Minas inhabitants were continually asking for silver and copper coins to be sent to the region.

A third explanation lies in the fiscal advantages of coining provincial rather than national coins. Silver provincial coins allowed for seigniorage gains of about 17%, whilst those for national gold stood at 6.6%. The coinage of copper coins was

²² Portuguese desires to develop some Brazilian regions such as the State of Maranhão and Grão-Pará, as well the captaincies of Pernambuco and Paraíba, were interlinked with the setting up of monopolist trade companies in the beginning of the second half of the 18th century. Pernambuco also received frequent remittances of provincial coins from Lisbon and from Bahia.

even more advantageous, which may explain the fact that copper coins were still being remitted to Brazil in large quantities up until 1805²³. As the supply of gold faltered and government expenditure grew, seigniorage proved an attractive source of revenue.

A final point deserves mention. We have not found any evidence of *agio* between provincial and national gold coins; most probably the former were accepted at their face value even in private transactions. On the other hand, we have found evidence that national coins circulated all over the colony, except in the Minas regions. What could explain the fact that Gresham's law did not prevail? According to Pandiá Calógeras (1960), both coins ran at their face values because people were simply not aware of their real values, and because silver coins were not so abundant. However, as soon as the crown abolished the exclusivity of commerce in 1808, these gold coins headed abroad.

Another hypothesis interlinks with the complementary role played by provincial coins. A hierarchical system of payments implied that "small currency was used to exchange goods in view of their immediate use within the local economy [and] large coins were used by merchants (...) considering nothing else but the equivalence of the goods exchanged, in view of further exchanges"²⁴. This reflects the complementary role played by the provincial and the national coins, which allowed for their exchange at face value.

CONCLUSIONS

Our research points to conclusions that contradict the traditional literature on the monetary matters of the Luso-Brazilian Empire. In the 18th century, Brazil was not only an economy that exported precious metal. Particularly along the coast, the production of agricultural commodities both for export and for domestic consumption remained an important part of the economy; indeed, gold extraction helped to bring formerly dispersed economic activities closer. In other words, there was a *national* economy under formation, a fact that led to an increase in the demand for means of exchange and payments.

²³ It is interesting to note that the stock of copper coins was probably higher in Brazil than in Portugal at the beginning of the 19th century.

²⁴ Fantacci (2008, pp. 54–55).

Brazil followed the monetary rules and practices of the metropolis: the demand for money as a means of payment meant demand for metal coins; gold coins in particular, due to their international acceptance, ranked at the top of the monetary hierarchy. Nevertheless, in the case of domestic exchanges, part of

the demand for money was met by provincial currency. Therefore, the monetary system of the Luso-Brazilian Empire throughout the 18th century was a dual currency system with *provincial* and *national* coins that were accepted at their official value due to their complementary roles.

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