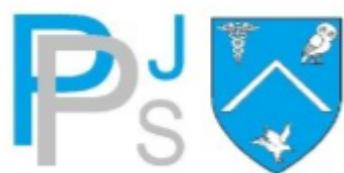


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The Problem with the Concept of Utility and its Measurement

Abstract

Utility is a fundamental notion of orthodox (mostly neoclassical) economics, but as it is an idea, that is very vague and thus impossible to define and measure, it did a lot of harm to economics as a science. Therefore, I strongly argue that this outdated and imprecise concept should be finally abandoned, especially as a basis for microeconomic consumer theory, because it is not only illogical, but also ideologically not neutral, and thus unscientific. For sheer inertia, the concept of utility, as a basis for microeconomic theory, is taught to the students, thus corrupting the young minds. Furthermore, the present financial and economic crisis, the most serious since the 1930s, should force the economists from the academia to seriously revise the foundations of microeconomic theory, and, as logical consequence, rewrite the handbooks in microeconomics. I do not merely argue that the utility theory defies both logic and empirical justification, as many authors did it before me. I argue that the very notion of utility is unscientific, and was kept in microeconomic books only because of sheer inertia, but this way it made a lot of harm to the science of economics, and, as a result to the real economies. I also argue that the subjectivist theory of value should be replaced with an objectivist one, based on value of labour.

Keywords: Utility, Ideology, Role of Economics; Role of Economists, Microeconomics, Economic Methodology.

Utility is, without any doubt, a fundamental idea in orthodox economic theory. In orthodox economics, especially orthodox microeconomics, it is assumed that utility is the “ultimate goal of all economic activity” (Penguin 1992: 437). However, there was (at least recently) never any serious discussion on validity of such crucial assumption – it was simply accepted via consensus by orthodox economists¹ that:

- utility exists and as such it is a valid notion;
- utility can be measured² and
- utility can be maximized³.

This lack of serious discussion of the concept of utility is linked to general lack of contemporary discussion on the philosophical and ideological foundations of economics. There are few exceptions, such as Christopher Hayes (2006) who wrote that:

Neoclassical economics, as the Chicago School of thought is now called, has become an international elite consensus, one that provides the foundation for the entire global political economy. In the United States, young members of the middle and upper-middle class first learn its precepts in the academy. Polls routinely show that economists and the general public have widely divergent views on the economy, but among the well-educated that gap is far narrower. A 2001 study published in the University of California’s *Journal of Law and Economics* showed that those with college degrees are more likely to subscribe to the views of neoclassical economists than the general public. This isn’t surprising.

1 And not only by the orthodox, but also by many unorthodox economists, such as behavioural economists and, above all, by virtually the whole Austrian School, a school based on the very idea of utility (especially marginal utility).

2 Either as *cardinal* or *ordinal* utility – see discussion later in his paper.

3 That assumes existence of utility functions and their particular properties – see discussion later in his paper and, for example, Beinhocker (2007) especially chapters 2 and 3.

He adds further:

Conservatives have long critiqued academia for the ways professors use their position to indoctrinate students with left-wing ideology, but the left has largely ignored the political impact of the way people learn economics, though its influence is likely far more profound.

Thus it seems to be of an utmost importance to find how microeconomics, based on such vague and indefinable notion as utility, shapes the whole orthodox economics, including not only micro, but also macroeconomics.

I. Introduction

In orthodox microeconomics, utility is generally accepted to be an illusive and elusive measure of the relative satisfaction from consumption of goods. For example Black (1991: 776) defines utility as “...the capacity of a good or service to satisfy a want...”, before going on to discuss the various, more detailed, but in no way more precise or objective definitions of this term. It is also important to note that even in authoritative **The New Palgrave Dictionary of Economics** (1991) the concept of utility is defined by referring it to the concept of wants, or human needs, but without any serious explanation of the latter terms.

Encyclopaedia Britannica (2008) defines utility as “satisfaction or benefit that a consumer derives from buying a commodity or service”. Similarly, **Collins Dictionary of Economics** (1988: 534) defines utility as “the satisfaction or pleasure that an individual derives from the consumption of good or service”. **The Penguin Dictionary of Economics** (1992: 437) defines utility as “the pleasure or satisfaction derived by an individual from being in a particular situation or from consuming goods or services”. Similarly **Investopedia** (2008) defines utility as “an economic term referring to the total

satisfaction received from consuming a good or service”, while **Farlex** (2008) is using basically the same definition.

Standard introductory textbook by Fischer and Dornbusch (1984: 103) defines utility simply as satisfaction, and claims that it does not need quantification, which is contradictory with the fundamental assumption that consumers maximize their utility – see also Begg (2005: 66). Furthermore, utility is absent in glossary to this textbook, which proves that even such eminent economists as Fischer and Dornbusch have fundamental problems with this term and are both unable and unwilling to solve it. More detailed discussion of utility is contained in a textbook by McDowell *et al.* (2006: 125-126). Authors explain there some limitations of the concept of utility and especially the impossibility of its measurement (including total failure of Bentham’s idea of utilometer), but nevertheless do not dare to reject the very idea of utility. Similarly Estrin & Laidler (1995: 50-61, 115-116) introductory textbook on microeconomics contains detailed discussion on utility maximization, but does not define precisely the very concept of utility. The same problem is with standard textbook on mathematical economics by Chiang (1984: 400-408, 747-748) – continuity of utility function is assumed there, but without any explanation or discussion on validity of such a fundamental assumption. Many textbooks on applied economics, such as on managerial economics, for example by Keat & Young (1996) ignore thus totally the concept of utility, while popular dictionaries such as that by Susan Lee (1988: 215-216) frequently discuss utility in details, however using very imprecise terms, defining it as “the pleasure or fulfilment that people derive from consuming a good or service”, and later quite seriously informs the reader about util, as a quantifiable and measurable unit of utility. On the other hand the entry of utility is concluded with a warning about very slippery nature of utility and that it is always changing (so it is very difficult to assess with any reasonable degree of accuracy).

It can be then clearly seen that utility is defined in orthodox microeconomics by satisfaction, benefit or pleasure – very unclear and vague psychological terms, that are rather impossible to define with any reasonable precision, terms that are by their very nature extremely arbitrary and dependent on changing circumstances of the person, for whom we would like to define and measure utility of goods and services, he or she consumes. Only few academic textbooks, such as, for example, Kopycińska (2005: 85.) openly admit that utility is a totally subjective idea, while other, such as, for example Rohacek (1989) try to develop their, rather orthodox, theories of human economic behaviour without even mentioning the concept of utility.

Finally, one should notice the work of George Katona⁴, one of the leading precursors of behavioural (or “psychological”) economics. In his books, such as **Psychological Analysis of Economic Behaviour** (1951) he has developed an original theory of economic behaviour that does not require introduction of such nebulous entity as utility. Katona studied economic processes as manifestations of human behaviour, so it can be said that he was one of the first to integrate psychology with economics. Before Katona the psychologists (or psychoanalysts) saw certain forms of economic behaviour in the daily problems of their patients – according to psychoanalysis, attitudes toward money involved important aspects of human relations, while spending and saving were frequently predicated upon the Freudian “irrational oral and anal needs”. However, such obviously pseudo-scientific “microanalysis” of economic behaviour was not Katona’s topic. He deals with more macroscopic and empirically testable aspects of economic behaviour, formulating cautious lawful propositions concerning the relations between such economic terms as income, saving and spending, and the specific choices of expenditures in a given environment. It is on the actual choice of expenditure in the presence of so-called enabling conditions (such as income and liquid assets), that Katona has

⁴ 1901-1981, former professor of economics and psychology at the University of Michigan, USA.

relatively the smallest amount to say. Katona has to restrict himself more or less to stating that economic processes are manifestations of human behaviour, so those processes can be also analysed from the point of view of modern psychology. His main point is that economic processes are more easily comprehended if the human factors and the psychology of decision formation and action are analyzed, so after explaining the need for psychology in economics, he developed his original theories of consumer behaviour, business behaviour and economic fluctuations. However, more detailed analysis of Katona's psychological theory of economic behaviour is somehow beyond the scope of this paper. What is most important here is that he did not see any need to introduce that unscientific notion of utility.

Given this imprecise and subjective measure of consumers' satisfaction, that is utility, orthodox economists try anyway to explain economic behaviour of individuals in terms of consumers' attempts to increase (generally to optimize) their utility. A theoretical unit of measurement for utility is thus usually called *util*⁵, but nowadays the majority of economists prefer not to use this unit, as it is virtually impossible to define, so it cannot be regarded as a scientific term. That impossibility to define *util* is one of the most important reasons explaining the failure of contemporary orthodox microeconomics, so it will be analyzed in more detail later in this paper.

5 Only in the early 18th century economists openly wrote that utility can be expressed as an absolute quantity, i.e. that the *cardinal* utility exists. Although *util* appears occasionally in modern orthodox economics, it is rather used marginally and not taken as seriously as it should be, providing widespread acceptance of not only the term itself, but also of its measurability. So present day orthodox economists abandoned the notion of *cardinal* utility in favour of *ordinal* utility and related to it indifference maps, in order to avoid unsolvable problems with *util* and *cardinal* utility. But the fundamental problems with definition of utility and its measurability (even "only" *ordinal*) were not solved, as those problems are simply unsolvable, giving the very arbitrary and immeasurable character of the notion of utility.

2. Controversies around utility

The 18th century doctrine of utilitarianism saw the maximization of utility as a moral criterion and as the most important goal for the humanity. According to leading utilitarians, such as Jeremy Bentham (1748-1832) and John Stuart Mill (1806-1876), society should endeavour to maximize the total utility of individuals, aiming for “the greatest happiness for the greatest number”. However, they were not so precise in details, for example it is not clear what they really understood by “utility” and how it could be aggregated and maximized, especially at the society’s level.

In neoclassical economics, rationality is usually defined in terms of utility-maximizing behaviour under some external constraints. According to microeconomic orthodoxy, utility as a hypothetical behavioural measure of satisfaction from consumption does not require attribution of mental states described as “happiness” or “satisfaction”, but it is anyway not clear how it can be described and measured at all. In order to escape the elusive util, utility is applied by orthodox microeconomists in such theoretical and unrealistic constructs as the indifference curve, which plots the combination of commodities that an individual (or a society) requires to maintain a given level of satisfaction. However, those indifference curves require precise definition of satisfaction, so they only superficially solve the basic problem of impossibility to measure the utility (even in “restricted” ordinal manner).

An indifference curve in orthodox microeconomics is a graph showing different bundles (or “packages”) of goods, between which a consumer is indifferent (at each point on the curve, the consumer does not prefer one bundle over another). However, those indifference curves do not really remove utility from microeconomics, as it is said that each point on the indifference curve is rendering the same level of utility. Utility is then understood here as a device to represent preferences, rather than something from which preferences originate (Geanakoplis 1987: 116-24).

Although indifference curves relate to ordinal utility, they still require several unrealistic assumptions such as:

- *Rationality* (or, in a more general mathematical context, ordering relationship) that requires *completeness* and *transitivity*, so for given preference rankings, the consumer can consistently choose the best bundle(s) - from lowest on up, and
- *Continuity* that means that the consumer can choose to consume any amount of the good, which also assumes that actual function describing indifference curve is continuous.

In orthodox microeconomics individual (as well as social) utility can be then generally interpreted as the dependent variable of a utility function and also of social welfare function. When coupled with production or commodity constraints, these functions can represent so-called Pareto efficiency, as illustrated by such theoretical and totally artificial constructions as Edgeworth's boxes and contract curves. Such efficiency is a central concept of orthodox welfare economics, but as it is outside of the scope of this paper, so will not be discussed here in more detail.

2.1. Cardinal versus ordinal utility

Orthodox microeconomists usually distinguish between *cardinal* utility and *ordinal* utility. When *cardinal* utility is used, the magnitude of utility differences is treated as an ethically or behaviourally significant quantity. On the other hand, *ordinal* utility captures only relative ranking, not strength of preferences. Utility functions of both sorts assign, in totally arbitrary, and thus not scientific way, real numbers to members of a choice set. Those numbers represent the utils – those hypothetical and deceptive units of utility. Orthodox (micro)economists attempted initially to aggregate utilities across different consumers. However, even they had to notice that interpersonal comparisons

of utility are doubtful, because there is no proper way to interpret how different people value so-called consumption bundles (sets of consumed goods and services).

When *ordinal* utilities are used by orthodox microeconomists, differences in utils are treated by them as ethically or behaviourally meaningless. The utility values assigned by them describe nothing else but arbitrary ordering between members of a choice set, so they say nothing about strength of the preferences. Because of problems with measuring utility, contemporary neoclassical economics has largely retreated from using *cardinal* utility functions as the basic objects of economic analysis, in favour of considering so-called agent preferences over choice sets. However, preference relations can often be understood as a special category of utility functions. In technical language (really a kind of pseudo-scientific jargon) of orthodox microeconomics *ordinal* utility functions are equivalent up to monotone transformations, while *cardinal* utilities are equivalent up to positive linear transformations.

However, orthodox microeconomics has not resolved whether utility is *cardinal* or *ordinal* and thus is unable to say in which cases it takes *cardinal*, and in which cases it takes *ordinal* appearance. In my opinion, such a question cannot be answered, as utility itself is an idea, which is impossible to define and measure. Thus the only rational way is to eradicate it in full from economics and especially from introductory handbooks, where it created unnecessary mess and constitutes a deadweight that holds the development of more scientific and thus less arbitrary microeconomic theory. But before arriving to the final results, I would like to show on selected examples how the very notion of utility leads to numerous paradoxes and contradictions.

2.2. Utility functions

While preferences are the conventional foundation of orthodox microeconomics, it is convenient to represent preferences with a utility

function and reason indirectly about preferences with those utility functions. Let X be the consumption set, the set of all mutually exclusive packages the consumer could conceivably consume (such as an indifference curve map without the indifference curves). The consumer's utility function is then defined as:

$$U : X \rightarrow R \quad (1)$$

Thus this function, in a totally arbitrary way, ranks each package in the consumption set. It is also assumed that if $u(x) \geq u(y)$ ($x R y$), then the consumer strictly prefers x to y or is indifferent between them.

In orthodox microeconomic models, there is usually a finite set of L commodities, and a consumer may consume an arbitrary amount of each commodity. According to orthodox microeconomics utility function $u : X \rightarrow R$ rationalizes so-called preference relation, but the latter term is not properly defined, and this “rationalization” has a very narrow, technical meaning. Furthermore in order to simplify calculations, various assumptions have been made in relation to utility functions such as constant elasticity of substitution (‘isoelasticity’) for utility functions with constant relative risk aversion or exponential form for utility functions exhibiting constant absolute risk aversion. Generally, most utility functions used in orthodox economic modelling exhibit monotonicity, convexity, and global non-satiation, but this is not based on empirical verification, but on totally arbitrary assumptions, so it is totally unscientific.

Early economists believed that total utility derived by a given consumer is additive so it is simply a sum of utilities of each good and service consumed by a particular consumer, i.e. that utility function has a form as below:

$$U_t = U_1(x_1) + U_2(x_2) + \dots + U_n(x_n) \quad (2)$$

where U_t is the total utility and $U_1 \dots U_n$ are utilities of each good or service $x_1 \dots x_n$.

Presently, utility function takes more fuzzy form, as below:

$$U_t = U_t(x_1, x_2, \dots, x_n) \quad (3)$$

It is claimed by orthodox microeconomic theory that equation (3) solves the problem with naïve model of additive utility, as it shows that total utility depends on the amounts and relationships of other goods and services consumed, but it says nothing at all about the shape of the utility function. It is so general statement, that is has no practical value and virtually says nothing about the properties of the utility function, so it should be simply rejected, according to the *Ockham's principle* of economy (Ockham's razor).

In orthodox microeconomics it is also assumed that the consumer always maximizes his or her utility. However, to solve the problem of utility maximization using the differential calculus (as it is routinely used by the marginalist school), we must assume that the utility function is always continuous⁶, otherwise the problem cannot be solved by using formal, mathematical tools.

In practice, a consumer may not always pick an optimal package, as such a choice may require too much time. So to account for the fact that perfectly rational decisions are often not feasible in practice, due to such factors as finite computational resources available for making them, the concept of bounded rationality was introduced in order to salvage utility-based microeconomics. This theory says that consumers can be satisfied with suboptimal ("good

⁶ The other assumption is that goods are not free of charge, but this one is quite realistic indeed.

enough”) bundles (so-called satisficing – Simon 1957 and Simon 1987). Followers of bounded rationality usually modify standard orthodox assumption by:

- limiting kinds and forms of utility functions;
- recognizing the costs of gathering and processing information and
- the possibility of having a vector or multi-valued utility function.

Bounded rationality also assumes that economic agents (and especially consumers) employ heuristics (or informal methods⁷) to make decisions rather than follow strict (rigid) rules of optimization. They behave this way because of the complexity of the situation, and their inability to process and compute the expected utility of every alternative action. As deliberation costs may be high and there are often other economic activities where similar decision-making is required, so orthodox microeconomics was somehow modified, in order to make it more realistic. Some “bounded rationalists” such as Gigerenzer (2002) even admit that simple heuristics frequently leads to better decisions than the theoretically optimal procedure, but they are unable to get rid of the very concept of utility.

2.3. Utility of money

One of the most common uses of a utility function in economics, is the utility of money. I will analyse this case in more detail, as it provides a good illustration how orthodox economists use the idea of utility in practice. The utility function for money is usually assumed by orthodox microeconomists to be a non-linear

⁷ Heuristic is usually defined as a method that often rapidly leads to a solution that is usually reasonably close to the best possible answer. Heuristics are thus the “rules of thumb”, “educated guesses”, “intuitive judgements” or even “common sense”. In more precise terms, heuristics stands for strategies using readily accessible, though loosely applicable, information to control problem-solving in human beings and machines (Pearl 1983: vii).

function that is delimited and asymmetric about the point of origin. These properties are derived from totally arbitrary assumptions that are generally accepted by orthodox academic economists, such as, for example Rudiger Dornbusch and Stanley Fischer, and especially by the proponents of rational choice theory, but nonetheless they were never verified empirically. The latter applies even to the proponents of “limited rationality”, such as, for example Herbert Simon with his “half solutions” to a very real problem of consumers and producers behaviour in the real, frequently irrational and largely unknown and hostile world.

According to orthodox microeconomists, the utility function is concave in the positive region, reflecting the phenomenon of diminishing marginal utility, or so-called First Law of Gossen⁸ - a yet another fundamental assumption that also escaped empirical testing. The boundedness of this particular utility function reflects another assumption, namely that beyond a certain (however not properly defined, and arbitrarily chosen) point money ceases from being useful at all, as the size of any economy at any point in time is limited. The asymmetry about the origin reflects another untested assumption that gaining and losing money can have radically different implications both for individuals and businesses.⁹ The assumed nonlinearity of the utility function for money has profound implications in decision making processes, especially in situations where outcomes of choices influence utility through gains or losses of money, which are the norm in most contemporary business settings. According to

⁸ The Second Law of Gossen relates to so-called optimal allocation of money than requires, according to Gossen, equal marginal utilities (or, in other words, “exchange ratio of goods is equal to the ratio of marginal utilities of the traders”). His Third Law was that a good has value only when the demand for it exceeds supply (i.e. subjective scarcity is the only source of value according to Gossen). His Second Law was his most important contribution to orthodox microeconomics and somehow anticipated the marginalist revolution of the 1870s. However, Gossen (1810-1858) was of too high opinion of himself (for example was writing about himself as a new Copernicus), so his method: abstract and detached from economic reality, and his pretentious style of his writings, was strongly criticized by the contemporary German Historical School, especially by Gustav von Schmoller (1838-1917).

⁹ This assumption seems to be quite rational, but, nonetheless, requires proper empirical testing before being accepted as an undisputed fact.

microeconomic orthodoxy, the optimal choice for a given decision depends thus on the possible outcomes of all other decisions in the same time-period. Again, this sounds very reasonable, but the chain of reasoning is not really convincing here, so it can be a case, when correct results are by pure chance derived from dubious reasoning.

2.4. Utility Maximization Problem

All it can be said about utility function is that it can be defined as

$$U_t = U_t(x_1, x_2, \dots, x_n) \quad (4)$$

where U_t is the total utility and $x_1 \dots x_n$ represent goods and services. The utility maximization problem is therefore defined as finding the consumer's optimal choices $x(p, w)$ where p represents prices of good (services) and w is consumer's wealth. According to orthodox microeconomics the solution $x(p, w)$ need not be unique: if u is continuous and no commodities are free of charge, then $x(p, w)$ is nonempty, but u (the consumer's utility function) must be continuous, otherwise there is no formal solution.

It can be thus seen, that in real life consumer equilibrium, understood as a point at which consumer maximizes his or her total utility U_t , cannot be calculated, as not only consumer's utility function is (as a rule) of unspecified shape (as it has unknown and unmeasurable parameters), but it can also change during the process of its very measurement. In other words in real life combinations of goods and services that consumer chooses for given level of income is impossible to compute as not only his or her utility function u is by definition undefined, but also it constantly changes, as consumer preferences are not fixed, neither is his or her real income (thus also consumer's wealth w is not constant) as prices p of goods and services $x_1 \dots x_n$ are in a constant flux. This failure to obtain consumer equilibrium is analogous to failure of centrally planned economies to obtain equilibrium understood as optimal allocation of

resources given particular needs, as in both cases it is (was) impossible to determine the crucial parameters of functions (equations) used to estimate the shape of either the utility function or production function.

So it is now clear that in orthodox microeconomics it is consistently assumed that the consumer always maximizes his or her utility. However, to solve the problem of utility maximization using the differential calculus, as it is customarily used by the marginalist school, we must assume that the utility function u is always continuous; otherwise the problem cannot be solved by using formal mathematical methods. As the other assumption says that goods are not free of charge, it can be accepted as realistic. However, ordinal utility is a view of utility measurement based on the presumption that although consumers' preferences cannot be measured according to a scale of their preferences, those preferences between the different goods and services can be ranked (first, second, third, etc.). But this is inconsistent with a demand for continuity of utility function, as goods (services) are ranked as 1st, 2nd, 3rd etc., so the ranking is not continuous at all. Thus this very formal trick with replacement of cardinal ranking by ordinal one does not really work and cancels any serious attempt to introduce differential calculus to microeconomics.¹⁰ There can be thus no surprise, that there were no successful attempts to describe actual utility functions and successfully estimate their parameters, as such functions, being, by definition, not continuous, cannot be analyzed using standard differential calculus.

2.5. Expected utility hypothesis, St. Petersburg Paradox, Ellsberg paradox and paradox of diamonds and water

In short: the expected utility hypothesis assumes that the utility of an agent facing uncertainty is calculated by considering utility in each possible state and

¹⁰ Differential calculus (at least the "traditional" one, as is used by the economists) is based on the idea of infinitely small changes and continuous functions – things (or better processes) not really found in real economies.

constructing a weighted average. The weights are assumed to be the agent's arbitrary assessed estimates of the probability of each state. The expected utility is thus an expectation in terms of probability theory, but based on totally arbitrary, and thus unscientific allocations of probabilities. To determine utility according to this method, the decision maker subjectively ranks his or her preferences according to the expected outcomes of various decision options. Thus according to this pseudo-scientific theory, if someone prefers *A* to *B* and *B* to *C*, then weights for the weighted average must exist, such that he or she is indifferent between receiving *B* outright and gambling between *A* and *C*. Obviously, this chain of reasoning is faulty, as it is entirely based on illogical decisions based on capricious, subjective and constantly changing choices.

Swiss mathematician Daniel Bernoulli (1700–1782) gave the earliest known written statement of this hypothesis as a way to resolve the so-called St. Petersburg Paradox. It is a paradox related both to probability theory and decision theory. It is based on a particular (theoretical) game named St. Petersburg Lottery. That lottery is based on a random variable with infinite expected value, i.e. infinite expected payoff, but would nevertheless be considered to be worth only a very small amount of money – itself an illogical contradiction in terms. The St. Petersburg paradox is a classical situation where a naïve decision theory, i.e. such that takes only the expected value into account, would recommend a course of action that no real rational person would be willing to take. The paradox can be allegedly resolved when the decision model is refined via the notion of marginal utility or by taking into account the finite resources of the participants. Some orthodox economists also claim that the paradox is resolved by noting, that one simply cannot buy that which is not sold, and that sellers would not produce a lottery whose expected results would be a loss to them. In other words: even if an agent (an entity) had infinite resources,¹¹ such a game would never be offered in a real economy (real life). If the lottery represents an infinite expected gain to the

¹¹ Which is, anyway, impossible from the rational and realistic point of view.

player, then it also represents an infinite expected loss to the host. Thus no one could be observed paying to play the game because it would never be offered in a real world. This is totally convincing, but it can be reduced to simply saying that the whole St. Petersburg Paradox is nothing more than pointless case, having nothing to do with the real world, real people and especially the real economy.

In the expected utility theorem, von Neumann and Morgenstern proved that any “normal” preference relation over a finite set of states can be written as an expected utility – thus von-Neumann-Morgenstern utility (von Neumann and Morgenstern 1944). It is important for orthodox microeconomics, as it was developed shortly after the Hicks-Allen “ordinal revolution” of the 1930’s, and it somehow revived the idea of cardinal utility in orthodox economic theory. However, as it was said earlier, orthodox microeconomics has not resolved whether (and if so, in which cases) utility is *cardinal* or *ordinal*.

The Ellsberg paradox is a paradox in decision theory and experimental economics in which people’s choices violate the expected utility hypothesis. It is generally taken by the orthodox economics as evidence for ambiguity aversion. The paradox was popularized by Daniel Ellsberg, although a version of it was noted considerably earlier by John Maynard Keynes (1921: 75-76, 315). As the Ellsberg paradox is well described in the literature (Ellsberg 1961: 643-669), I will only note here that this paradox holds regardless of the assumed shape of the utility function. It can be reduced to a trivial statement that the consumer prefers receiving some money to receiving nothing, but from Ellsberg paradox one can derive (in the formal notation):

$$U(\$n) > U(\$0) \tag{5}$$

but also

$$U(\$n) < U(\$0) \tag{6}$$

$$U(\$n) = U(\$0) \tag{7}$$

where $n > 0$.

Orthodox macroeconomists claim also that the Ellsberg paradox can be taken as evidence for some sort of ambiguity aversion which cannot be accounted for in expected utility theory, as it has been (allegedly) demonstrated that this phenomenon occurs only when the choice set permits comparison of the ambiguous proposition with a less vague proposition, but not when ambiguous propositions are evaluated in isolation (Fox and Tversky 1995: 585-603).

There have been various attempts to provide explanations of Ellsberg's observation. Since the probabilistic information available to the decision-maker is incomplete, these attempts focus on quantifying the non-probabilistic ambiguity, which the decision-maker faces. These alternative approaches suppose that the agent formulates a subjective (though not necessarily Bayesian) probability for possible outcomes. One such attempt is based on info-gap decision theory, in which the agent is told precise probabilities of some outcomes, though the practical meaning of the probability numbers is not entirely clear (another example pseudo-scientific mumble, so frequently found in the orthodox microeconomic theory). As no probability information whatsoever is provided regarding other outcomes, so the agent has very unclear subjective impressions of these probabilities. This way everything collapses again to subjective impressions, which are impossible to define and measure, as the elusive and unscientific notion of utility itself.

In light of the ambiguity in the probabilities of the outcomes, the agent is unable to evaluate a precise expected utility. Consequently, a choice based on

maximizing the expected utility is also impossible. The info-gap approach thus *supposes* that the agent implicitly formulates info-gap models for the subjectively uncertain probabilities. The agent then tries to satisfy the expected utility (in an unspecified manner) and to maximize the robustness against uncertainty in the imprecise probabilities. This robust-satisfying approach is assumed to be developed explicitly to show that the choices of decision-makers should display precisely the preference reversal, which Ellsberg observed (Ben-Haim 2006), but none less does not provide salvation to utility-based microeconomic theory.

The last paradox discussed here is the paradox of diamonds and water, which was supposed to prove that the labour theory of value was incorrect. As Adam Smith observed, water is very useful but it was then very cheap. By contrast, diamonds were not very useful in 18th century (they were then used only for jewellery), but were (and still are) very expensive. Thus Smith said that if demand depends on the usefulness of the product, then we would expect water, as the more useful product, to command the higher price, but actually diamonds were more expensive. Because of this alleged paradox, Adam Smith came to the conclusion that willingness to pay is not related to utility, so he distinguished between “value in use” and “value in exchange” (Smith 1976, Black 1991: 776).

According to Smith value in exchange was not related to usefulness and was based on the labour theory of value. The marginalists did not like this,¹² so they introduced the concept of marginal utility and made the following assumption in order to explain this paradox:

¹² Especially as labour theory of value leads to Marxian theory of surplus value and to exploitation of workers as a most important source of profit.

Total satisfaction of the consumer is the sum of the utility of water and the utility of diamonds;

Total utility of diamonds increases as one consumes more diamonds;

Total utility of water increases as one consumes more water;

The consumer tries to spend his or her income in such a way as to maximize utility and

The Law of Diminishing Marginal Utility holds, i.e. marginal utility of given good or service decreases, as the quantity of the good increases, *ceteris paribus*.

Thus the scarcer good (diamonds) are supposed to have the higher marginal utility, even though plentiful good (water) provides the greater total utility. This was supposed to open the way to develop a theory of value and demand based on utility, that is generally based on **equimarginal principle**, i.e. in order to maximize the utility derived from a given income, it is necessary to allocate the spending among different goods and services in such a way that the marginal utility of each good or service consumed, divided by its price, is the same as the quotient of marginal utility divided by price for every other good consumed, or:

$$MU_A/P_A = MU_B/P_B \tag{8}$$

where MU is marginal utility, P is price and A and B are goods or services.

It was then said that this **equimarginal** principle explains higher prices of diamonds as the consumer will be paying the higher price for more scarce good (i.e. diamond) as it has the higher marginal utility. However, those, mostly technical tricks, do not really explain the paradox of diamond and water, as they are based on too many arbitrary chosen and frequently unrealistic assumptions. It is thus more proper to implement here the Ockham's razor and

eliminate the unnecessary entity, in this case utility, and explain this paradox by simply comparing amount of labour required to deliver to the consumer water to this required to deliver diamonds. As water was in times of Adam Smith easily obtainable in Great Britain, but diamonds had to be excavated and transported for a long distance (usually from South Africa), so water was then cheap (and frequently even free of charge), while diamond demanded high prices. Today's relative high prices of diamonds are also a result of oligopolistic market, dominated by De Beers Company, while prices of necessities, such as water, are usually controlled by governments, that are under strong pressure to keep the price of water low, so it will be available even for the poorest members of society.

3. Criticism of utility

Different value systems have different perspectives on the use of utility in making moral judgements. For example, Marxists, Kantians, and certain libertarians (such as Nozick) say, although for totally different reasons, that utility is irrelevant as a moral standard or at least not as important as other factors such as natural rights, law, conscience or religious doctrine.

3.1. Marx

Marxian economics simply reject the very notion of utility as Marxian economic theory is based on labour theory of value, and sees the marginalist schools as "vulgar" or superficial economic pseudo-science, concentrated on events that are happening on the markets and rejecting any more profound investigations as to the source of value, for futile pseudo-scientific investigations of such superfluous entities as utility, entities that cannot be properly defined or measured. Moreover, Marxist School sees the whole orthodox economics as based on class distinctions, as the orthodox school rejects labour theory of value as leading to such ideas as surplus value that has a source in workers' exploitation (Mandel 1979a: 7-28).

Marks (as Smith and Ricardo before him) said that exchange value must depend on something common to all goods and that human labour embodied in goods and services is the one common factor on which exchange value depends.¹³ Marx expressed the labour theory of value even more precisely than Ricardo. In Marx's terms, the value of a commodity is the **socially necessary** labour time embodied in it (so extra time needed by less than average skilled workers does not increase value of their products). Therefore in a competitive capitalist economy, all commodities are priced (at least in a longer run) at their values and in such economy, labour is a commodity and is priced at its value. The wage paid for a labour-day would be thus the labour time socially necessary to produce the goods and services the worker (and his or hers family) needs to be able to work for a day, that is normally much less than what worker produces during the labour-day (otherwise it would make no economic sense to employ the worker). Thus if each day of work produces, under normal conditions, a labour-day of value and costs less than a labour-day of value, there is a fraction of a labour-day left over, which was called by Marx a surplus-value. Since labour produces all value, but gets only a part of what it produces, this surplus value is, according to Marx, a fruit of exploitation and constitutes a profit that is expropriated by the owner of capital. This explains quite well why labour theory of value had to be abandoned by orthodox economists – they had to either accept it, and thus agree that free market capitalism is essentially an unethical system, or reject it

¹³ The most important exception is the land, as it was said that land supply couldn't be increased by more labour. However, labour can be used to improve land and to open to agriculture land, which was previously regarded as not arable. According to Ricardo it is the labour required for production **on marginal land** that determines the normal price or value of agricultural products and the surplus of production on more fertile land is absorbed by the rent. Owners of the land do not have to do anything to earn this rent, as they get it automatically, as a result of the competition for more fertile land. Thus after Ricardo the only exception to labour theory of value were the absolutely scarce goods, such as works of art, but their unusually high prices can also be explained by exceptionally high quality of labour necessary for their creation.

in favour of other theory of value, that would somehow justify the exploitation of labour.

Marx has also discovered that due to differences in organic composition of capital¹⁴, the industries with lower organic composition (i.e. with relative lower importance of labour) have lower rates of profits (as human labour is the only major source of value and profits) – *ceteris paribus*. This seems to be contrary to the principle of equalization of profit rates in competitive system. In other words if organic compositions of capital can vary from one industry to another (that is rather realistic assumption due to different technologies used by different industries) and if profits are equalized in a competitive system by flow of capital from less profitable to more profitable industries, so the value in exchange has to deviate systematically from the labour embodied in the goods or services produced. This is other major reason why orthodox economics has moved away from the labour theory of value.

However, as markets are not perfectly competitive and frequently under some kind of state control and/or dominated by monopolies and oligopolies, it is now generally assumed that labour theory of value is (at least) approximately correct. Nobel Prize winner Chicago economist George Stigler calculated (Stigler 1987) that the labour theory of value could account for 93% of the differences of relative prices in the US in the 1940s, and that the remaining 7% could reflect many different causes, no one of which amounts for more than a percent or two (some of the differences could be simply random fluctuations).

¹⁴ This is a ratio of constant (fixed) capital (such as buildings and machinery) to variable capital, or wages paid to workers – in Marx's terms c/v . Note that other definitions of this term are used in the literature. One is $c/(m+v)$ i.e. the ratio of constant capital to newly-produced value (roughly to what orthodox economists call "value added"), i.e. to surplus-value + variable capital and thus close to the concept of a capital/output ratio. Less common is the measure used by Paul M. Sweezy, i.e. $c/(c+v)$ – the ratio of constant capital to the total capital invested.

Thus it cannot be said that the labour theory is entirely wrong. It is now accepted, even by orthodox economists, that in a modern economy with a wide range of organic compositions of capital, the labour theory holds, but with relatively minor exceptions. As contemporary economies are dominated by huge multinational and transnational corporations, monopolies and oligopolies, it can be now assumed, that criticism based on differences of rates of profits caused by different organic compositions of capital, is of relatively minor importance. Furthermore, as argued by Baran and Sweezy (1966)¹⁵, modern capitalism faces the major problem with selling the economic surpluses, created by capital accumulation. According to them increases in marketing, defence spending and various forms of debt would tend to alleviate the falling rate of profit as foreseen by Marx. However, they believed that these remedies to difficulties of contemporary capitalism were inherently limited and that monopoly capital would tend toward economic stagnation. This was quite accurate forecast, as evidenced by long-term recession started by energy crises of the 1970s and virtually lasting till today, and by the economic and financial crisis of early 21st century (Keller 2010: 119-137, Minc 1998 Chapters VI-VIII).

Furthermore, in an essay titled “The Peaceful Transition from Socialism to Capitalism”, Sweezy (1964) predicted the collapse of so-called Communism¹⁶ in the Soviet Union, more than twenty-five years in advance of the event, and

15 In this book Baran and Sweezy also argued that the whole free market capitalism is, as a system, largely irrational, since though individuals try to make rational decisions, the ultimate systemic goals are irrational: pursue of profits, that destroys human relationships, leading to wider alienation and hostility between humans. The system continues to function so long as Keynesian full employment policies are pursued, but there is the continued threat to stability, for example from less-developed countries, throwing off the restraints of neo-colonial domination (such as today’s India and especially China).

16 In reality an extreme form of state capitalism, officially named “real socialism” to distinguish it from the “welfare state” systems introduced in the West by social-democratic and labour parties.

that the Soviet managerial class would become a capitalist class¹⁷. Almost twenty years ago, another follower of neo-Marxist school, James O'Connor (1973), predicted the chronic government deficits that have plagued the more developed countries, especially the US, since the 1980s. This proves that economic analysis based on creative and unorthodox following of Marxian economic theory can be a very powerful tool of diagnosis of dynamics of contemporary capitalism (see, for example, Sweezy 1979).

On the other hand the main problem with utility-based theory of value is that it is too much based on arbitrary and unrealistic assumptions as to human behaviour. Therefore it cannot be accepted as a basis of truly scientific economic theory. As I will try to prove in conclusion to this paper, arbitrary and unrealistic character of utility-based microeconomics made it a kind of 'celestial mechanics of non-existing sky' (Boulding 1981).

3.2. Kant

According to Kant (1997), the principle of "private happiness" is the direct opposite of the principle of morality. Kant understands happiness as consisting the satisfaction of all our desires: *extensive* – in regard to their multiplicity, *intensive* – in regard to their degree and *protensive* – in regard to their duration. Unlike the moral law, happiness, according to Kant, is a hypothetical, not a categorical, imperative. Furthermore, Kant points out that such a pragmatic or utilitarian ethics¹⁸, cannot help being empirical, for it is only by experience that one can learn either what inclinations exist which desire satisfaction, or what are the natural means of satisfying them. Such empirical knowledge is, according to Kant, available for each individual in his own way. Hence there can be no universal solution, in terms of desire, of the problem of

¹⁷ Ernest Mandel argued with this opinion in his article "Why the Soviet Bureaucracy is not a New Ruling Class" (1979b: 63-86). See also Sweezy (1980).

¹⁸ Which is for him the same as an "ethics of happiness".

how to be happy and this how to maximize happiness. To reduce moral philosophy to a theory of happiness must result, therefore, in giving up the search for ethical principles, which are both, according to Kant, universal and *a priori*.

In sharp opposition to the pragmatic rule, Kant sets the moral (ethical) law as a road to not simply be happy, but rather to be worthy of happiness. In addition he claims that a *categorical imperative*,¹⁹ which imposes an absolute obligation upon us, takes no account of our desires or the means of satisfying them. Rather this imperative dictates how we should act in order to deserve happiness. This is drawn from Kantian *pure reason*, and not from experience, and therefore has the universality of an *a priori* principle, without which, in Kant's opinion, a genuine science of ethics is impossible.²⁰ It is thus possible to say that there is no place at all for utility in Kantian philosophical system. Although there is in Kant's philosophy a mention of the Principle of Utility, he understands it as performing only those actions, which have the greatest (possible) benefits for the greatest number of people. These actions are thus to promote general happiness, and should become a universal law, so there are some parallels, but only rather superficial, to Bentham's and Mill's principle of "greatest good for the greatest number of people" (Bentham 1781).

3.3 Nozick

Utilitarianism can also be criticized using a so-called *utility monster* of Nozick. It was assumed that in a given (hypothetical) society exists an entity, which has a greater ability to gain utility from resources, than other entities that belong to this society, so such a monster takes all those resources from the society, and this should be accepted on moral grounds by the utilitarians, as

¹⁹ "Act only according to that maxim whereby you can at the same time will that it should become a universal law" – Kant (1997: 30).

²⁰ See also **Kant's view of utility and happiness?** (2010).

Nozick's *monster* gains more utility from a unit of resources than any other member of this hypothetical society. However, according to orthodox point of view, this would seem to be only relevant to societies with comparatively small total utility. It is assumed that populations with high total utility would require that the Nozick's *monster* be able to extract ridiculously large amounts of utility to be able to beat the totals of an entire population, so the problem would somehow disappear by itself in a truly miraculous way.

If the Nozick's *utility monster* can get so much pleasure from each unit of resources, so it follows from utilitarianism that the distribution of resources should acknowledge this. If the Nozick's *utility monster* existed, it would justify the mistreatment and perhaps even total destruction of everyone else, according to the doctrine of utilitarianism. This thought experiment, conducted by Robert Nozick²¹, shows that utilitarianism is not actually egalitarian and is simply amoral (at least according to moral standards accepted in the modern Western societies).

3.4. Behavioural economics and its limited critique of utility

In neoclassical economic theory it is assumed, that decision makers, given their knowledge of utilities of given goods and services, alternatives, and outcomes, can compute which alternative will yield the greatest total utility. In the less orthodox microeconomics, especially in behavioural microeconomics, the term bounded rationality is used to designate models of rational choice that take into account the *cognitive limitations* of both knowledge and cognitive capacity. Bounded rationality is thus a central theme in behavioural economics. It is concerned with the ways in which the actual decision-making process influences the decisions that are eventually reached. To this end, behavioural economics departs from one or more of the neoclassical assumptions underlying the theory of rational behaviour.

²¹ 1938-2002, distinguished American philosopher and ethicist.

For example: according to **Colin Camerer (1999: 10575-10577)**:

Utility maximization is the assumption that people rank objects – e.g., monetary gambles, shopping baskets of products, and jobs – consistently enough to permit assignment of a unique utility number $u(X)$ to object X . Contrary to this presumption, there is a long list of ways in which utilities depend on how objects are described or on the way in which choices are made; these changes suggest that preferences are ‘constructed’.

Thus behavioural microeconomics on the one hand hits in the very heart of orthodox microeconomics, but on the other hand it halts in half way and does not dare to reject the very notion of utility and possibility of its maximization (Simon 1957, Simon 1987 and Hosseini 2003: 391-409).

It is also interesting to find the main differences between the neoclassical approach and behavioural (sometimes called agent-based evolutionary) approach to consumer theory, which I present in the Appendix. I use the model proposed in year 2003 by Valentino Piana (2008), who wrote that:

Many students at the end of the course in Microeconomics are very sceptical about the realism of the neoclassical theory, especially the part about consumers, since they have direct experience of buying acts and they know how they choose. And they find no trace of high mathematics and optimization procedures. They don't use computer software to compute optimal choices.

So, fortunately, the neoclassical model of consumer, widely presented in standard textbooks used to teach microeconomics, no longer represents the “unique game in town” (using V. Piana words).

4. Conclusion

Criticism of utility, especially as a cornerstone of orthodox microeconomics, can be summarized in few main points:

1. Utility is an abstract, unscientific notion that cannot be properly defined and cannot be measured.
2. Utility is unique to each individual, so it cannot be used to build any universal theory that could be applied to different consumers in different situations.
3. As utility is such a vague and immeasurable notion, it does not make any sense to talk about its maximization, especially as it is impossible to properly define and empirically verify any utility function, which, anyway, cannot be described as continuous (the latter is a formal requirement for application of precise tools, such as differential calculus, to microeconomics).

To avoid the problems with definition of utility and its measurement, orthodox economists rarely argue what consumers really enjoy and at which particular levels of intensity, assuming (rather conveniently) that this enjoyment is a purely psychological fact (Collins 1992: 437) This, however, does not solve the basic problem with definition of utility and says nothing about its measurement. **The Collins Dictionary of Economics** (1992: 534-535) clearly states that as utility is the derivation of satisfaction from the use of a good or service, it will vary according to the (consumer's) state of mind, and therefore is a condition unique to each individual, and can easily change in time for the same individual. Thus it seems logical, that there should be not one orthodox microeconomic theory, but as many different theories as there are individuals, as every human being is unique, and almost every state of human mind is unique, and varies in time.

It also should be not forgotten, that although the very notion of utility was disputed almost since the first moment it appeared in economic theory, and it was never supported neither by empirical evidence nor by pure logic, the existence of utility, and its assumed properties, was, regardless, accepted in economic orthodoxy as an undisputed fact. This has very widespread

consequences, as if utility is in the “worst” case a false idea, or even in the “best” case it cannot be precisely defined and measured, so the whole micro- and also macroeconomic orthodoxy seems to be built on dubious foundations, and thus requires complete rebuilding, this time on different, more rational foundations, as (I shall repeat it gain) in orthodox economics it is assumed that utility is the “ultimate goal of all economic activity” (Penguin 1992: 437).

Therefore, I would like to propose to base the new, scientific microeconomics on labour theory of value, which was, for mostly political and ideological reasons, abandoned in the late 19th century during the so-called marginal revolution in economics. However, the labour theory of value is consistently accepted as (at least generally) valid by even some Chicago School economists, such as Nobel Prize laureate George Stigler, and, above all, by business and politicians, who highly value longer working hours and late retirement ages. The best example is contemporary discussion in France, where conservative government wanted to scrap 35 hours working week, introduced by previous, social-democratic cabinets and has extended the retirement age (even in conditions of high and chronic unemployment). If hours of work did not matter, no government of any major country would be involved in discussion on increasing the length of the working day or on rising up the retirement age. So such discussions clearly confirm, that human labour is the main and most important source of wealth and value, so it should be treated as a basis for any fully scientific economic theory.

Such rational foundations of economic theory are understood here as confirming to the empirical testing and as free of arbitrary and ideology-based assumptions, as possible. In my opinion only economic theory that is not based on such arbitrarily chosen and not provable assumptions as existence of such entities as utility and possibility of its rational maximization, can be used as base for truly rational, truly scientific and truly effective economic policy. The negative influence of utility-based assumptions on economic theory can also

explain, in my opinion, the consistent failure of orthodox economics in predicting real life events in economics, such as the Great Crisis of the 1930s, stagflation of the late 1970s, collapse of Soviet Economy in the late 1980s, and even recent (early 21st century) economic problems in the US and whole capitalist world, but this obviously exceeds the scope of this paper.

Finally, I would like to cite Hayes (2006), who wrote that:

Neoclassical economics smuggles a great many normative wares underneath its positive trench coat, both in its assumptions about how humans operate – as individuals rationally maximizing their utility – and its implied preference for “markets in everything.” Because neoclassical economics always presents itself as a value-neutral description of the world, its ideological commitments can be adopted by those who learn it without any recognition that they are ideological.

The problems seems to be that:

A growing global movement of “heterodox” economists has criticized the ideological confines and blind spots of the neoclassical approach. As Nobel Laureate Joseph Stiglitz put it, the dominance of the neoclassical model is a “triumph of ideology over science.” In the popular press, however, such dissent is almost entirely absent. When protesters disrupted the 1999 World Trade Organization meeting in Seattle, WTO officials, mainstream economists and the *New York Times*' Thomas Friedman ignored the fact that in much of the world neoclassical reforms had failed to produce the promised growth. Friedman went so far as to dismiss the protesters as “flat-earthers.” For Thomas Friedman, people can't “disagree” with neoclassical economics. They can only fail to understand it. (Hayes 2006)

But the general problem seems to be that:

“A little economics can be a dangerous thing “[...] An intro econ(omics) course is necessarily going to be superficial. You deal with highly stylized models that are robbed of context, that take place in a world unmediated by norms and institutions. Much of the most interesting work in economics right now calls into question the Econ(omics) 101 assumptions of rationality, individualism, maximizing behaviour, etc. But, of course, if you don’t go any further than Econ(omics) 101, you won’t know that the textbook models are not the way the world really works, and that there are tons of empirical studies out there that demonstrate this.” (Hayes 2006)

Unfortunately, for the majority of academic economists, those “highly stylized models that are robbed of context” are too frequently the only reality they want to deal with. However, the real danger is when their false vision of how economy works is accepted by the political decision makers. And one of the reasons why that “academic’ vision of economy is false, is that is based on such vague and unscientific notions as utility.

Therefore, as an idea of utility is simply illogical and very much unclear and thus impossible to define and measure, it did a lot of harm to economics as a science. For this reason, I strongly argue that this outdated and imprecise concept of utility should be finally abandoned, especially as a basis for microeconomic consumer theory, for it is not only unscientific, but also ideologically biased. Only because of sheer inertia and resistance to change, the concept of utility, as a basis for microeconomic theory, is been taught to the students, thus corrupting the young minds of the future leaders. Furthermore, the present financial and economic crisis of the early 21st century, the most serious since the 1930s, should force the economists from the academia to seriously revise the foundations of microeconomic theory, and, as logical consequence, rewrite the handbooks on microeconomics.

I do not merely argue here that the utility theory defies both logic and empirical justification, as many authors did it before me. I argue that the very notion of utility is unscientific, and was kept in microeconomic books only because of the conservatism, sheer inertia and ideological, anti-labour bias of the majority of academic economists, so this way it made a lot of harm to the science of economics, and, as a result to the real economies. I also argue that the subjectivist theory of value should be replaced with an objectivist one, based on value of labour. As this mean return to Ricardo and Marx, so be it. As with the so-called marginal revolution the science of economics went astray, we have no other choice as to start again, from the point that is located in the late 19th century, when Jevons, Menger and Walras, for purely ideological reasons, introduced to the theory of economics an unscientific, irrational and simply harmful idea of so-called diminishing marginal utility (Black 1991: 777).

Appendix
Comparison of the neoclassical and behavioral approaches to consumer theory according to Valentino Piana

I. The context of choice

Topics	Neoclassical approach with well-behaved preferences	Behavioral (agent-based evolutionary) approach
Timing	All buying choices are taken at the same time (simultaneously).	Choices are sequential.
Information available to consumer	The consumer has full information about all existing products, their use and their effects on his welfare (utility).	Limited information.
Degree of difficulty of the choice	Zero. The choice is always easy, with all 'pros' and 'cons' already evaluated and compressed in a monotonic measure (utility).	Choice can be easy, moderate or extremely difficult, depending on the situation.
Importance of advertising	None. The consumer has its own tastes and they cannot be changed.	The limited information of the consumer can be extended by advertising. Depending on the decision-making style, advertising can have an important influence beyond the mere information.
Mistakes	The consumer does never make mistakes in computation and choices.	The consumer can make mistakes.
Consumption and purchases	Consumption decision and their psychological laws determine purchase acts.	Buyer does not need to be the direct consumer. Buying decision may have an intrinsic logic different from consumption (e.g. to buy large quantities when the good is cheaper and store them for long periods).
The role of experience	None. The consumer ex-ante knows everything and actual consumption does not change his evaluation of the utility.	The first-time purchase is characterized by expectations; repurchase is, at least in part, based on the experience gained through personal experience.

The place where choice is made	Non-explicit; it is a virtual decision in the consumer's mind.	In shops, supermarkets, and other Point of Sales; through Internet or other non-store distribution channels. The available commercial offer does influence final choice.
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II. How the consumer decides

Topics	Neoclassical approach with well-behaved preferences	Behavioral (agent-based evolutionary) approach
Consumer rationality	Full rationality based on consumer's (assumed) huge mathematical skills.	Bounded rationality based on simple decision-making rules with almost no mathematics.
Budget	The consumer has a money budget limit, which is systematically exhausted.	The consumer keeps always a reserve of slack resources to cope with further expenditures.
Non-monetary constraints	Absent.	Time is a non-monetary, non-purchasable constraint in many choices; in grocery purchases, at physical commercial premises the weight of the purchased basket can be a constraint (lower for consumer coming back home by foot and higher for car users).
Definition of substitution between the goods to be chosen	Two goods are substitutes when a fall in consumed quantity in one can be perfectly compensated by an additional quantity of the second (so that consumer's utility is constant).	Two goods are substitutes when they fulfil the same need(s).
Substitution foundation	Completely subjective, given, expressed in terms of a linear or non-linear indifference curve.	Interpersonally validated.
mathematics used in formal models to solve the problem of the consumer	Equations and systems of equations are the main formal devices.	Tree algorithms and disequations are the main formal devices; extensive use of IF-THEN statements.

III. What the consumer buys

Topics	Neoclassical approach with well-behaved preferences	Behavioral (agent-based evolutionary) approach
Chosen set of goods	The chosen bundle of goods maximizes utility (graphically: it is on the highest indifference curve) and exhausts the budget (it is on the budget line).	The chosen good is the “first solution matching certain sufficiency criteria” or is selected across simple comparisons.
Effects of marginal changes in prices	Small changes in one price modify the quantity bought of all goods.	No change of quantity or discrete changes on the few goods concerned.
Range of purchased goods	All goods (X, Y,..) are bought by the consumer.	A specific consumer buys only a small selection of all existing goods.

IV. Market

Topics	Neoclassical approach with well-behaved preferences	Behavioral (agent-based evolutionary) approach
Market demand	Market demand is the sum of individual demand of totally independent consumers.	Market demand is the sum of individual demand but consumers may interact (e.g. imitate other’s choices).
Heterogeneity of consumers I	Consumers differ because of income.	Consumers differ because of income, skills, decision-making routines, etc.
Heterogeneity of consumers II	Consumers differ because of utility functions (Cobb-Douglas, sum-of-squares,...) - never used in real marketing research.	Consumers differ because of parameters, which have empirical counterparts.
Who reacts to changes in prices	Changes in prices modify the behaviour of all consumers.	Most consumers continue to behave as before, only some change so to produce the entire market effect.
Diffusion of a specific good in the population	All consumers.	Most consumers do not buy.

Source: Piana, V. **Consumer Theory: The Neoclassical Model and its Opposite Alternative** <http://www.economicwebinstitute.org/essays/consumerttheory.htm> (as on 10 February 2008)

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The Russian minority issue in Estonia:
host state policies and the attitudes of the population

Abstract

The article analyses the recent developments of the relationship between Russian minority in Estonia and its host state. It gives a theoretical background on the minority issue in the triangle of “kin-state/ minority/ host-state”. In Estonia, the principle of Restitution governed the emergence of the Estonian policies. By the end of the 1990s the elites realized that the course towards the integration of the non-Estonian minority should be taken. The mood in the society can be traced from the mostly exclusive citizenship and language policies towards more inclusive course on integration. The author states that after the events of 2014, the attitudes towards the Russian minority were mixed, with some signs of radicalization, but overall there were attempts to include the minority more in the life of the country.

Keywords: *Russian minority, minorities, Estonia, Russia*

In this article I will analyze the complex relationship between the Russian minority of Estonia and its host state - Estonia. This analysis will take into account the interconnection in the triangle of „kin-state – minority - host-state“, but concentrate on the host state policies and the attitudes of both minority and majority. It is clear that the state of Estonia does not exist in a vacuum, and its policies towards minorities are being largely influenced by the third factor, that of the „kin-state“ of Russia. But for the purpose of the analysis, I will not concentrate on the kin-state in this paper.

First of all, let me give some theoretical background on the issue of minority and diaspora.

The concept of national minority is traditionally understood in the European context as referring to ethnic groups living in a state, that are linked to a nation that has constituted its own state, so-called "kin-state". The term was also used for the Jewish people and more recently for other groups like the Roma and a variety of autochthonous regional ethnic communities. In a wider context, one can define national minorities in opposition with immigrant ethnic groups as historical communities occupying a given territory or homeland and sharing a distinct language and culture.¹

It must be mentioned that there is no accepted legal way to referring to a minority. It is often referred to as a „diaspora“. The terms “national minority” and “diaspora” are very close and often used interchangeably. At the same time, the term diaspora suggests a more close connection to the country of origin, the idea of common exodus country is very important. William Safran defines what a diaspora is proposing a set of criteria. These criteria include dispersal from a specific original „center“ to two or more „peripheral“ regions, retention of collective memories of the original homeland, partial alienation and insulation from the host society, a lingering desire to return to the

¹ Tanase, Ioana. 2003 Allocataire de recherche, Ecole doctorale de droit comparé, Université de Paris I Sorbonne
Seminar Series "Citizenship and National Minorities in Europe", January 2003
St. Antony's College, University of Oxford <http://www.sant.ox.ac.uk/esc/esc-lectures/Tanase.htm>

homeland, a commitment to the maintenance or restoration of the „safety and prosperity“ of that homeland, and the deprivation of a communal consciousness and solidarity from that relationship.² Some scholars though argue that the catastrophic origins and forced migration are the main features of a diaspora. It is so-called classical „victim“ definition of a diaspora - „the idea of dispersal following a traumatic event in the homeland, to two or more foreign destinations.“ Among other characteristics of a diaspora, it has been suggested that the existence of integration myth is important, which expresses itself in a strong pull to the homeland or striving for returning there. The idea of integration myth is the characteristic not only of classical, but also new diasporas. It suggest the idea of a „home“, ethnic homeland of the members of a diaspora, where they can return.³

Robin Cohen classifies diasporas into different types - victim (Jewish, African, Armenian), labour (indentured Indians), imperial (British), trade (Lebanese, Chinese), and deterritorialized (Caribbean peoples, Sindhis, Parsis). From the point of interest of this article, Russian diasporas are classified as imperial, as the colonial powers other than Britain fall into this category. Other synonymous expressions are “settler” or “colonial” diasporas.⁴

The specificity of the Russian diaspora in what Moscow calls “near-abroad” is that it is a divided ethnic group, dispersed in the territory of new independent states bordered with Russia. In some Russian theoretical work, it is called “an imperial diaspora that is a result of political catastrophe - the collapse of a big political-territorial formations, resulting in the fact that those migrating to imperial periphery find themselves in the new social, cultural and other living conditions”. It is also noted in the literature that the decrease of the living

² Varadarajan, Latha. 2010. *The Domestic Abroad: Diasporas in International Relations*. Oxford University Press. p. 8

³ Zatulin, K.F., Grozin, A.V., Dokuchaeva, A.V., Jegorov, V.G., Lobanov, M.A., Mihailov, V.P., Polnikova, O.V, Shibaeva, E.I., Boltovsky, S.O. 2011. *Rossiyskaya diaspora kak faktor ukrepeleniya natsionalnyh interesov Rossiji na postsovetskom prostranstve.*, Moscow. p.10. Available at: <http://materik.ru/upload/iblock/b87/b8715b81e87dc3f2996b59b5baf0627f.pdf>

⁴ Cohen, R. 2008. *Global Diasporas. An Introduction*. Second Edition. Routledge, London, p. 18

standard of these diasporas lead them to be closer to so-called proletariat diasporas.⁵

In the framework of international relations, Rogers Brubaker distinguishes so-called trio or “triangular configuration between national minorities, the newly nationalizing states in which they live, and the external national “homelands” to which they belong, or can be construed as belonging, by ethnocultural affinity, though not by legal citizenship. This relationship has been engendered, or given new urgency, by the new (or newly salient) mismatch between cultural and political boundaries. The massive nationalization of political space in Eastern Europe has left tens of millions of people outside “their own” national territory at the same time that it has brought the national, or putatively national, quality of both persons and territories into high relief.⁶

Russian minority in Estonia, according to the theoretical framework just described, can be classified as the settler community or imperial minority or a diaspora. It is important to remember the circumstances of its emergence first of all.

The information portal Estonia.eu briefly describes the background of the issue as such: „The Republic of Estonia, established in 1918, lost its independence when it was occupied by the Soviet Union in June 1940. After the independence of the Republic of Estonia was restored in 1991 on the basis of legal continuity of statehood, Estonia was able to reinstate the right of its legitimate citizens.

In the course of the Soviet occupation, the demographic situation in Estonia had been dramatically altered as a result of the Soviet Union's sovietization policies. During the tumultuous years of 1940–1949, about 60 000 Estonians, out of the population of about 1.1 million, were either killed, deported to Siberia and other hinterlands of the Soviet Union, or imprisoned in Stalin's

⁵ Zatulin, K.F. 2011. *Op.cit.* p.69.

⁶ Brubaker, Rogers. 2005. „The 'Diaspora' Diaspora.“ *Ethnic and Racial Studies* 28: 1-19., p. 108

concentration camps, while at least an equal number fled to the West. At the same time a large number of Soviet citizens, including military staff from various parts of the Soviet Union, were sent to Estonia as a result of Soviet forced migration policies. In 1934, there were 992 500 ethnic Estonians living in Estonia, making up 88.1% of the country's population. By 1989, this number had dwindled to 963 281 or 61.5%, less than the pre-war level. At the same time, the number of non-ethnic Estonians living in Estonia, of which the majority were ethnic Russians, grew almost fivefold from 134 000 in 1934 to 602 000 by 1989. From 1990 to 1998, 113 000 people left Estonia, the majority of whom were born abroad.

According to population censuses, Estonian citizens constituted 97.7% of the population in 1922 and 98.8% in 1934. After the restoration of Estonia's independence, persons who held Estonian citizenship before 16 June 1940 and their descendants were automatically considered to be Estonian citizens. Thus, roughly two-thirds of the 1.5 million Estonian inhabitants restored Estonian citizenship in 1992. All other Estonian residents could obtain Estonian citizenship through the naturalization process. At the same time, all Estonian residents who had been Soviet citizens had the right to register themselves as citizens of Russia, the USSR's successor state, or to choose any other citizenship. As of 1 February 2015, 84.3% of Estonia's population held Estonian citizenship, 9.4% were citizens of other countries, and 6.3% were of undetermined citizenship.“

Thus, the main principle on which the restored Estonian republic was based was that of restitution – it is crucial to understand that in 1991 not a new state was born, but the old one was restored after the occupation. As a consequence, the political elite and ethnic Estonians in Estonia saw the Russian-speaking population first and foremost as a problem and a legacy of Soviet era with some voices even for the resettlement policies to Russia. The main aim of the policies though was not directed strictly against the minority,

but to the protection of the endangered by the long russification Estonian national identity in terms of language and culture. Mainly the instruments of exclusive citizenship policy and language policies were used in the 1990s.

The current Citizenship law considers several possibilities to be eligible for the Estonian citizenship. The main principle is that the citizenship is either acquired by birth or obtained by naturalization process. The automatic procedure is foreseen for all the children born to the parents, of whom at least one is an Estonian citizen.

The naturalization procedure is described in the law as this: the person applying for naturalization must be at least 15 years of age; must have resided in Estonia at least for five years on the basis of the permanent residence permit; must master the Estonian language according to the requirements provided in the Citizenship law (para 8); must know the Estonian Constitution and the Citizenship law according to the requirements set in the law (para 9); must own a legal permanent income; be loyal to the Estonian state, and give an oath: „Applying for Estonian citizenship, I promise to be loyal to the Estonian constitutional order“.⁷

One of the problems of the original law was that of the minors who being born in Estonia, did not receive citizenship and had to go through naturalization procedure. This was a violation of the International Covenant of Civil and Political Rights (art. 24(3)) and the Convention of the Rights of the Child (art. 7(1)), both of which Estonia had ratified. These provisions proclaim the right of the child to acquire a nationality. This controversy triggered a heated discussion. Some politicians and lawmakers saw the danger of compromising the governing principle of nationality acquisition (*ius sanguinis*) by adding the *ius soli* principle to it.⁸

⁷ 1995. Eesti kodakondsuse seadus [Citizenship Law of Estonia], Riigi Teataja. [in Estonian] Available at: <https://www.riigiteataja.ee/akt/KodS>

⁸ Järve, Priit. 2009. Estonian citizenship: Between Ethnic preferences and democratic obligations. In Bauböck, Rainer, Bernhard Perchinig and Wiebke Sievers. eds. 2009. *Citizenship Policies in the New Europe*. Amsterdam University Press., p.49

This situation was changed in the amendment to the law of the 21st of January 2015. According to the new rules, the child born in Estonia before the 1st of January, 2016, whose parents are not citizens of any other state (so-called aliens) will obtain Estonian citizenship automatically, unless his or her parents or a single parent would apply for the refusal of the citizenship before the 1st of January, 2017.⁹

The policy started in 1995 by the law, led to the situation where a large pool of people with „undefined citizenship“ was formed. It applied to the group of people, those migrants from former Soviet republics and their children, who did not pursue any country's citizenship after the collapse of the USSR. All former USSR citizens though qualified for the citizenship of Russian Federation. Persons of undefined citizenship are eligible for an alien's passport, commonly known as a „grey passport“, which allows for visa-free travel within Schengen treaty countries, as well as in Russian Federation.

The status of the aliens is regulated in Estonia by the Law on Foreigners, the latest edition of which came into force in 2010. It regulates among other things the conditions for issuing a long-term resident permit in case of permanent residence in Estonia, it also contains so-called „integration requirement“ (para 234), which stipulates that the person applying for the permanent resident permit must master the Estonian language on the level B1, the requirement is not valid for the persons under 15 and over 65 years of age.¹⁰

The citizenship policy of Estonia has been a subject to heated debate and different attitudes. It has been one of the main issues to divide the communities inside Estonia. The approaches of Estonians and Russian-speakers have been almost diametrically opposed to each other. The approach characteristic of Estonians draws heavily on history and underlines that the changes in the ethnic composition during the Soviet years, when the share of Estonians fell

⁹ 2015. Kodakondsuse seaduse ja riigilõivuseaduse muutmise seadus.[The Law on changing the Law of Citizenship and the Law on State Tax] Riigi Teataja.[in Estonian] Available at: <https://www.riigiteataja.ee/akt/103022015001>

¹⁰ 2010. Välismaalaste seadus. [The Law on Foreigners] Riigiteataja, [in Estonian]. Available at: <https://www.riigiteataja.ee/akt/VMS>

from 90 per cent to almost 60 per cent between 1940 and 1989, were dangerous for the survival of the Estonian nation. Therefore, refusal to grant nationality to Soviet-era settlers by registration was regarded by many Estonians as an adequate reaction to these changes in the population. The Estonian side also argues that in comparison with the citizenship laws of other countries the Estonian requirements for nationality are quite liberal by current international standards.

The opposite approach, taken by the Russian-speaking minorities and by several international actors, maintains that history and nation should not matter as much as the Estonians think they do. Rather, one should start with the present multi-ethnic situation and think about individuals. Stateless people are considered a security risk, since their interests are not represented at the state level. The proponents of this view think that Estonia should grant citizenship more generously, simplify the conditions of naturalization and especially language requirements.¹¹

The domestic debate on the issue of nationality used to be conservative. The elite deemed that the initial non-inclusion of Soviet-era settlers into the citizenry served the interests of the survival of the Estonian ethnic nation and its culture.¹²

As time goes by, one can see the changes in the thinking of Estonian politicians. The debate was activated again, as the amendment on the automatic citizenship for minors was being discussed in the Parliament in 2014. At that time, the representative of the IRL (Union of Pro Patria and Respublica, a conservative party) Jaak Aviksoo stated that the amendment will „change the basic principle of *ius sanguinis* and allows for the obtaining of the Estonian citizenship without the expressing one's will by birth. IRL does not approve of the automatic citizenship to everyone, as the citizenship cannot be pressed on anyone. To receive the citizenship, there must be the will of a person or

¹¹ Järve 2009. *Op.cit.*, p.54

¹² *Ibid.*, p.55

his/her parents, as it used to be.”¹³ Aaviksoo also stated that this amendment does not serve Estonia’s interests. The amendment was passed on the 21st of January, 2015 with the majority of 61 versus 12, with IRL voting against.

At the same time, the opposition party Keskerakond (the Centre party), known for its pro-Russian sympathies, has voiced concerns in connection with citizenship policy being too strict. The interesting part is that they built up their argument using the security discourse. The article by Jaanus Karilaid, the president of the board of the Centrist Party in Läänemaa region, is headlined „Citizenship policy – the threat to Estonian security“. The article describes the results of the integration and argues that the number of Russian citizens is growing steadily because of too strict rules for naturalization into Estonian citizenship. „The present citizenship policy is building an internal enemy to us. Let us lose this threat“, is the last sentence of this article.¹⁴ Similar view was held by ex-minister of national affairs, SDE (Social-Democratic party) member Urve Palo, „The state could actually apply the procedure (of giving the citizenship in the simplified way – A.T.) to all so-called holders of „grey passports“, who lived in Estonia before the 26th of February, 1992 and their children. Surely, they must themselves express the wish to become an Estonian citizen“.¹⁵ Palo suggests that the state should do everything in order to prevent our own people from falling into „grey zone“, where they have no citizenship at all. In the long run, it will damage Estonian national interests as well as the interests of domestic and foreign policy, according to Palo. We can see that by 2014, the debate among the elite became more liberal with more options being acceptable.

¹³ Kukk, Kaido. 2012. „Aaviksoo: kodakondsuspoliitika aluspõhimõtetest loobumine pole Eesti huvides.“ [Aaviksoo: Renunciation of the principles of the Citizenship policy is not in Estonian interests“] [in Estonian]. Available at: <http://www.riigikogu.ee/index.php?id=181675>

¹⁴ Karilaid, Jaanus. 2014. „Jaanus Karilaid: Kodakondsuspoliitika – oht Eesti julgeolekule“ [Jaanus Karilaid: The Citizenship Policy – the Threat to Security of Estonia“] . 5.03.2014, Lääne Elu. [in Estonian]. Available at: <http://online.le.ee/2014/03/05/jaanus-karilaid-irl-oht-eesti-julgeolekule/>

¹⁵ Palo, Urve. 2014. „Urve Palo: võtkem halli passi omanikud Eesti kodanikeks“, [Urve Palo: Let us take the Owners of the Grey Passport as Estonian Citizens“] 20.02.2014, SDE home page. [in Estonian] Available at: <http://www.sotsdem.ee/urve-palo-votkem-halli-passi-omanikud-eesti-kodanikeks/>

Very closely connected to the citizenship issue, but nevertheless a separate policy, is that of the language. The current language policies in Estonia have their roots in the past, in the legacy of the Soviet era and in the legislation of the early phase of the independence process. The language policy discourse is also characterized by its connection to the security – the former president of Estonia Arnold Rüütel once said that Estonians have „a continuous feeling of danger“.¹⁶

It is noteworthy that the trend in protecting the language of titular nation against Russification started already in Soviet times, and the first Language Law was passed on 18 January 1989 by the Supreme Soviet of the Estonian Soviet Socialist Republic. The law described Estonian as the sole official language, but the main principle was that of bilingualism. The law of 1989 should be seen as a remedy to language problems at that time. The main problem had been a catastrophic growth of Russian monolingualism, reasons being demographic changes, low status of Estonian in several functional and regional areas, and non-integrative education.¹⁷

The 1992 Constitution of the Republic of Estonia stipulates that the official language of Estonia is Estonian. The state guarantees everyone's right to receive instruction in Estonian (para 37(4)), to address state agencies, local governments and their officials in Estonian, and to receive responses in Estonian (para 51(1)). The official language of state agencies and local governments is Estonian (para 52(1)).¹⁸ The Constitution also guarantees individuals belonging to ethnic minority groups the right to education in their native language; to establish cultural and educational institutions, and to communicate and conduct affairs using a minority language in local government institutions and localities where a majority of the residents of the

¹⁶ Kemppainen, Raija. 2000 „Language Policy in Estonia: A Review.“ *Deseret Language and Linguistics Society*. Vol. 26, pp. 51-58

¹⁷ Rannut, Mart. 2004. *Language Policy in Estonia*. *Noves SL. Revista de Sociolingüística*, Spring-summer. Available at: <http://www6.gencat.net/llengcat/noves/hm04primavera-estiu/docs/rannut.pdf>

¹⁸ Constitution of the Republic of Estonia. Available at: <http://www.president.ee/en/republic-of-estonia/the-constitution/>

region speak that language as a native tongue. These provision are detailed in the National Minorities Cultural Autonomy Act of 1993.¹⁹

Further on, the legal environment for the language is closely connected to the citizenship policy. Under the citizenship law, one is expected to have Estonian language proficiency at A2 level. Before the citizenship law, the Law on the Estonian Language Requirements for Applicants for Citizenship was adopted in 1993.

The general framework for the language policy of the later times is the Language Law of 2011. The law stipulates among its objectives the development, preservation and protection of the Estonian language. The law also regards the Estonian language as the state language of Estonia.²⁰

Quite an important and well known fact is that by the same law, the status of minority languages is also stipulated in para 5. Para 9 of the law states that the minority language can be used in the municipality where at least half of the permanent residents are the representatives of the minority – in this case, the residents have the right to turn to the municipality in their minority language and receive a feed-back in the minority language. The law also stipulates the general language requirements for the public servants and limited companies, while more detailed category requirements are to be defined by separate by-laws.

Two principles appear to dominate the state's current approach to language issues. These are the principles of Restoration and Integration. These principles are clearly visible in a number of major policy documents published in recent years.

The above described policies, citizenship and language policy, show the tendencies of the first years after restitution to focus on the protection and maintenance of the Estonian ethnic identity. By 2000, it became clear that the majority of Soviet migrants are not planning to leave Estonia. The social

¹⁹ 1993. National Minorities Cultural Autonomy Act. Available at: <https://www.riigiteataja.ee/en/eli/ee/Riigikogu/act/519112013004/consolide>
2011. Keeleseadus. [The Language Law]. Riigiteataja. [in Estonian]. Available at: <https://www.riigiteataja.ee/akt/118032011001>

scientists claimed that the existing model was so-called „one country- two societies“, which could be dangerous socially as well as in terms of security. This is how, the first Integration programme was born under the direction of the minister of ethnic affairs. It led to the toning down of ethnocentric debate in the society.²¹

The state programme of 2000-2007 was coming to an end, and the first conceptual discussions on the new programme took place, as the so-called Bronze soldier crisis broke out. The ethnic relationships seemed to be improving gradually, and the April protests came to many as a surprise. The government's decision to relocate the monument of the Soviet era known as „Bronze Soldier“ from the centre of Tallinn to a military cemetery brought out to light the deep differences between Estonians' and non-Estonians' communities. Some researchers claimed though that there was also a positive influence of the Bronze soldier crisis – that is the fact that the integration policy was brought in the focus of public debate in Estonia. Lauristin and Vihalemm said that „after the April crisis, Estonian public understood that the success of the integration policy is important not only to the Russian minority or European experts, but is a key issue for the whole development of Estonia, for Estonians' as well as non-Estonians' future.“²²

That far, I looked briefly at the relationship between the Estonian state and the Russian minority in Estonia, or „host-state“ vs „minority“ relationship. It can briefly be characterized by the dichotomy of two sets of policies – exclusive policies (e.g. citizenship policy) and inclusive policies (integration).

Now I would like to analyze the attitudes of the minority itself, the identities of its members. In Estonia, the so-called Integration Monitorings have been conducted regularly since 2000, and there have been five of them (2000, 2002, 2005, 2008, 2011)

²¹ Kasemets and Kurvits 2005, cited in Kallas, Kristina and Ingi Mihkelsoo, Kaarin Plaan. 2012. Lõimuv Eesti 2000-2011. Integratsiooni monitooringute analüüs [The Analysis of Integration Monitoring]. [in Estonian]. Insitute of Baltic Studies, p. 8

²² Lauristin and Vihalemm 2008, cited in Kallas, Kristina and Ingi Mihkelsoo, Kaarin Plaan. 2012. Lõimuv Eesti 2000-2011. Integratsiooni monitooringute analüüs. [The Analysis of Integration Monitorings]. [in Estonian]. Insitute of Baltic Studies, p. 11

The problems of identity have been researched in 2008 and 2011 Monitorings, to a smaller extent in 2005 as well. From the point of view of this article's research question, it is interesting to note that the so-called „state identity“ has been also studied in the Monitorings. This notion emerged in the middle of the 2000s, and the first analysis was done in 2008 Monitoring. The state identity of non-Estonians is a collective „we“-feeling, characterized by positive importance of belonging to the Estonian state, sharing of Estonian state's values and symbols. To measure those factors a special index EVRI was constructed, consisting of three components: assessments of statements: 1) „Nowhere in the world do I feel as at home as in Estonia“; 2) „I feel pride seeing the Estonian flag“; 3) the answer to the question on the objectives of Estonian ethnic policy „How important is it, in your opinion, to continue to pursue in the ethnic policy the acquisition of the Estonian language by the Russian-speaking population?“. To measure the EVRI index, the scale of seven points (0-6) was used, the higher the number, the stronger the state identity. In the group of non-Estonians with weak or rather weak state identity, the percentage of Estonian citizens was below half (41%), as in the group with strong state identity, the majority (76%) were Estonian citizens. The correlation also existed in the identity versus the command of the Estonian language.

In 2011, the EVRI index was not measured, but the state identity was analyzed on the basis of the feeling of belonging. The question was asked: „The Constitution says that the power in the Estonian state belongs to people. Do you consider yourself belonging to the Estonian people in the meaning of the Constitution?“. The results showed that 13% of Estonian citizens who are ethnic Estonians do not consider themselves as belonging to the people, the other ethnic groups' citizens has the number 30% as not belonging (65% feels the belonging, 5% cannot say). It is remarkable that more than a half of the persons with unidentified citizenship (52%) and two fifths of Russian citizens (41%) feel connection to Estonian people. 44% of the persons with unidentified citizenship and 54% of Russian citizens do not feel the connection.

The Integration Monitoring 2015 measured again the index EVRI, but this time, it was compiled in a different way, which makes the comparison with the year 2008 not plausible. The EVRI was measured as the collective “we”-feeling of Estonian Russians, which characterize the importance of belonging to the Estonian nation, the positive assessment of the rights and obligations connected to it, and the adoption of the Estonian state symbols as one’s own. The researchers constructed the index, comprised of the three components – the assessments of the statements “If you think of yourself as of representative of one’s ethnic group and the representative of the Estonian nation, to which group do you feel yourself as belonging to?”, “the Estonian state protects my interests and offers public goods” and “I fell proud seeing the Estonian flag”. According to the researchers, the tests confirmed that exactly these components are the best suitable to measure the bondage of the Estonian Russians to the Estonian state and its symbols both consciously and emotionally.²³

Every response was given up to three points depending on the strength of the agreement (0-3 points), and the EVRI was measured on the scale 3 to 9 points, the more points one’s index is, the stronger is the state identity of the respondent. Further on the results were divided into the segments accordingly into the weak state identity (3-4 points), medium (5-6 points), and strong (7-9 points) state identity. The non-Estonians divided into the three groups like this: 17% had the weak identity, 47 % - medium, and 36% - strong state identity. There was some correlation depending on the citizenship (Estonian citizens tend to have stronger state identity) and the command of the Estonian language (the ones who claim their level of Estonian is good, are more likely to have a stronger state identity).²⁴

The research base also allowed to see correlations between EVRI and the threat perception. Only 6% of the respondent with the weak state identity

²³ Eesti ühiskonna lõimumismonitooring 2015. [The Integration Monitoring of Estonian society].[in Estonian]. Available at: www.kul.ee/et/eesti-uhiskonna-loimumismonitooring-2015 , p.25

²⁴ *Ibid.*, p.26

considered Russia as threatening Estonian independence or the local inter-ethnic relations. About one fifth (19-20%) of the respondents with the strong state identity see Russia as threatening.²⁵

Now that I analyzed the identity of the Russian minority, I would like to summarize shortly the current attitudes of Estonian establishment towards the minority issue. I chose the year 2014 for analysis, extending it to the end of March 2015, as it was when the parliamentary elections took place in Estonia. Due to the events in Ukraine in 2014, the issue of security of Estonia and the role of its Russian minority became quite prominent on the political agenda. The reaction of Estonian authorities was to do more lobby work in the direction of NATO allies, and it resulted in more NATO deployments on the Estonian soil. The debate inside Estonia also started on whether the NATO allies can be trusted and how much Estonians should rely on their own defense capabilities.

The Parliamentary elections took place in Estonia on the 1st of March, 2015, and ended with a decisive victory of the Reform Party, which used to rule also before the elections. They received 30 seats in a 101 seats Parliament (Riigikogu) with the Centre Party coming second with 27 seats.

The phenomenon of the Centre Party is interesting from the point of view of this article, as it is not ethnically-based party either by its ideology or by the ethnicity of its leaders, but most of its voters are non-Estonians. In 2015 elections the Centre Party did well gaining one more seat than during last elections, but they hoped for more. As mentioned above, the permanent residents of Estonia has the right to vote in the municipal elections, which leads to the situation where the mayor of Tallinn is basically always from the Centrist Party, as the population of Tallinn is about 50% made up from Russian-speakers. In the national elections though, other political forces usually refuse to form a coalition with the Centre Party, and they remain in the opposition. There have been cases though when the Centre Party was part of the government after interim reshufflement (e.g. in 1995, the 32d Government,

²⁵ *Ibid.*, p.29

and in 2003, the 36th Government). Other political forces sometimes give as a reason for not cooperating with the Centre Party the fact that the Centre Party has a cooperation agreement with the Russian party „Edinaya Rossiya“ („United Russia“.)

In 2015 elections, the two new parties passed into the Parliament, Vabaerakond (Free Party) and EKRE (Estonian Conservative Peoples' Party). EKRE is the first Party in the Parliament during restoration of independence, which holds far right views. They gained seven seats. EKRE's policies are directed towards supporting young Estonian families, reducing emigration of Estonians abroad, fighting immigration from outside of the EU, and they are also quite Eurosceptic. The success of this party in the parliamentary elections may show the tendency of radicalization among Estonian community. The party has been active in its stand against immigration from the Middle East and Africa, especially in the light of the EU Commission plans to allocate the immigrants to all the EU members according to calculated quotas. Though this radicalization is quite in line with overall tendencies in Europe, in Estonia it is always coloured by anti-Russian policies. The programme of EKRE states that the citizens must be active against both external and internal enemy to back the security of the nation and the state and the survival of the independent Estonian Republic and its development as a nation-state. It also states as its objectives the creation of the environment needed for the survival of the Estonian language and culture.

In the media, the topic of Estonian identity was quite popular during the described period. It manifested itself often through the notion of “Estonianness” (“*eestlus*”), which was understood differently by the opinion leaders. It was often raised in connection with emigration of ethnic Estonians abroad and the necessity to keep their language and culture. On the other hand, it was opposed to Russia and Russianness, the feeling of danger increased during events like the Bronze night, the Georgian war of 2008, and the occupation of the Crimea in 2014. There was clearly a divide, there were those who were back in older stereotypes of ethnic identity, judging that having the citizenship

of Estonia is not necessarily the same as being Estonian.²⁶ But there were also voices for the so-called „new Estonianness“, particularly by the pro-Estonian Russian minority politicians, which would base the identity on the citizenship and European values.²⁷The Centre party went even further in its statements, saying that there should be identity on the basis of a territory, „common home“. As one can see, the debate was quite colourful, and not orthodox any longer, the tendency towards trying to think how to include the minority in the society. It showed vibrant democratic attitude towards the issue of minority and towards Estonian own identity.

To conclude, I would like to say that the latest events in the region, and the elections of the Parliament of Estonia in 2015, had mixed effects on the situation of the Russian minority and the attitudes of the Estonian majority. On one hand, it is the first time after the restoration of independence when the extreme right party got into the Estonian Parliament, and it can be interpreted as a sign of radicalization. On the other hand, the support for the extreme right policies remains marginal among the population. In general, the events of 2014 - beginning of 2015 did not lead to further exclusion of the Russian minority from the Estonian society. On the contrary, the political discourse is very much concentrated now on the opportunities to include the minority and create a common „we“ feeling, notwithstanding the Russian policies coming from abroad, which I did not deal with in this article.

²⁶ Sutrop, Urmas. 2014. „Kes on eestlane on ainult Eesti riigi kodanik?“ [Is Estonian only an Estonian Citizen?]. *Eesti Päevaleht*, [in Estonian], December, 21

²⁷ Metlev, Sergei and Jevgeni Kristafovits. 2015. „Me oleme kõik eestlased“ [„We are all Estonians“]. *Postimees*, [in Estonian], January, 16

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The Impact of International Sanctions upon
Iran's Economy after the Revolution

Abstract

There has been a disambiguate question that how would be the futuristic developments and consequences of lifting the current sanctions from Iran since the successful negotiations of the P5+1 group with Iran over the country's nuclear program. This paper strives to answer the raised question and demonstrate the starting point of the conflict as well as how the international community's concerns escalated throughout the past decades which eventually led to imposing international sanctions on the country's economy. In addition, the paper will offer a brief historical background about Iran's nuclear activities and its developments in order to help readers a deeper understanding of the topic. At the end, the author will draw his conclusion about the impact of lifting sanctions from Iran's economy both domestically and internationally.

Keywords: *Iran, sanction, economy, oil, politics*

Introduction

Perhaps one of the main purposes of any revolution in a given society is ideally to change the status quo for the sake of a better future, but sometimes ideals do not meet the reality, and even in some cases go completely on the opposite direction. Iran is one of those unique examples in which people's desire for a change in the system has failed to bring a better outcome due to various reasons after the Iranian revolution of 1979.

The people's revolution ideally meant to change the old and rusty system of Shah to a better democratic system in which people's demands would be appreciated and respected by the nominated government of all citizens of Iran. But the reality of the people's revolution turned out differently from what they expected to happen and the country adversely fell into the wrong hands. For those who captured the power, the revolution was a blessed victory and great achievement, but for those who cherished democratic values and positive changes were a great disappointment and undisputed disaster.

The main objectives of this paper would be on discovering the causes of sanctions, as well as displaying the impact of sanctions on Iran's economy. This work strives to project the cause and effect of the international sanctions upon the country which paralyzed its economy. The starting point of our journey is the Iranian revolution which altered Iran's politics both domestically and internationally. Furthermore, we will analyze the following events after establishment of the Islamic government in Iran until the joint plan action (JPA) which is the due date for an agreement over the Iran's nuclear program.

During this time-interval, which our main focus would be around it, the Islamic regime has founded and formed by the clergymen. Iran's hostile policies steadily isolated the country from the International community and Iran's economy became weaker and less competitive in this period. Iran's nuclear ambition brought negative consequences to Iran's financial and economic situation. The United States, China, Russia, France, the United Kingdom and Germany initially agreed to impose sanctions upon the country. As a result, the Iran's economy and Iranian people have tremendously suffered

from the international sanctions, severe embargos and political isolation of the country.

But before we get into the details about the motioned subjects, there are some points which I like to cite in order to make it clearer for the readers. This paper has no intention to diagnose the internal or external motives of the Iranian revolution before the 1979. Also, the historical events are going to be analyzed for the sake of explaining the impact of them on the country not for defending or offending any political thought or theory.

Moreover, this paper does not attempt to offer any theoretical or practical solution to the current economic and political problems of the country whatsoever. The righteousness and morality of those sanctions which supposed to target the regime not Iranian people are questionable but we will not get into that and unfortunately would be excluded from the objectives.

As last but not least, evaluation of Iran's economy is a complex subject due to the nature of the Islamic government and lack of transparency in the numbers and statistics that are published by authorities. Therefore, this paper will be consist of political and economic events and their impacts after the Iranian revolution which illustrates the motives of international sanctions upon the country, as well as explanatory role of natural resources in the economy of Iran.

Natural Resources versus Atomic Ambition

Iran is an oil-rich country and stand on the 4th rank after Venezuela, Saudi Arabia and Canada in the crude oil reserve²⁸ in the world. The estimated amount of Iran's oil reserve by Organization of the Petroleum Exporting Countries (OPEC) is around 157.3~157.8 billion bbl which is approximately 13% of the OPEC shares²⁹. In addition, the country holds 3rd rank after the United

²⁸ CIA, *The world factbook*, (Accessed, 25.05.2015),
<https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

²⁹ OPEC Annual Bulletin 2014, (Accessed 25.05.2015),
http://www.opec.org/opec_web/static_files_project/media/downloads/publications/ASB2014.pdf.

States and Russia in natural gas reserve which is 166.6 billion bbl cubic meters³⁰.

As a result, the role of natural resources in the statecraft is very important. Iran's dependency on oil and gas makes the economy of country very vulnerable to oil prices during the turmoil of global market. Iran's economy suffers from the *Dutch disease*³¹. If we assume that oil production is one of the eyes of Iran's economy, so with no doubt, we can say gas is the other one. Therefore, it is practically easy to paralyze Iran's economy without taking very complex and sophisticated measurements. But the dependency of country started not very long time ago.

Approximately, two centuries ago, Iran's oil history come to existence. The first discovery of oil in one of the southwestern regions, *Masjed Soleiman* in 1908³² turned the country into an oil-state. Seven years earlier to that date, a British oilman, William Knox D'Arcy who was one of the founder of oil and petroleum in Iran, signed an agreement with the Shah of Iran, *Muzaffar al-Din Khan* to explore, develop, and produce exclusively any oil or gas in that region.

In return, the Shah would receive approximately 20 thousands pound in cash, as well as receiving 16% of the net annual profits and other benefits according to the agreement. It did not take a long time from the discovery of oil in Iran that the Anglo-Persian Oil Company (APOC) was established by British³³ oilmen. The company later changed its name to the Anglo-Iranian Oil Company (AIOC) with the request of Reza Khan/Shah, the former military

³⁰ CIA, *The world factbook*,

³¹ The Economist weekly journal described the diseases in the economic development of natural resources (such as oil or gas) and a decline in the manufacturing sectors due to a large inflow of foreign currency, cheap costs of importing and less competitiveness of domestic manufacturing sectors.

³² See Stephen Hemsley Longrigg, *Oil in the Middle East: Its Discovery and Development*, (London: Oxford University Press, 1968)

³³ Edward Henniker, *Nationalisation: The Anglo-Iranian Oil Company, 1951 Britain vs. Iran*, Seven Pillars Institute, Vol. 2, 2003, p.1.

general who established Pahlavi dynasty in the country. The company ultimately after the nationalization of oil in Iran became British Petroleum or known as BP.

Perhaps oil discovery and its sub-products altered the world and International Political Economy (IPE). In 1901, oil did not play a crucial role in Iran's affairs expect an extra income for the monarch, but after the nationalization of oil by the prime minister, *Muhammad Mossadegh* in 1951-53, oil became an important source for the statecraft. Before that Iran's share of profits was very limited unlike the counterparts and other partners. Although, there were always some disputes over the division of incomes and profits between the Iran's authorities and British, but so tense as it became in the mid-19th century which led to the nationalization of oil in the country.

In 1951, *M. Mossadegh*, the elected prime minister of that time who was the member of *Tudeh*, left-wing party, turned Iran's oil disputes with British MNC into a political challenge for the Iranian parliament and people which eventually led to nationalization of Iranian oil by the majority vote of *Majlis*³⁴. Despite to the fact that Mossadegh shortly after this glorious victory for Iranians was removed from power by the 1953 coup d'état backed by the United States and the United Kingdom under the "*TPAJAX project and Operation Boot*".

In the meanwhile, *Muhammad Reza Shah*, the son of *Reza Khan*, restarted his father's developments plan at full speed in the country due to the high oil revenues from nationalization of oil, base on three main pillars; the military power, the bureaucracy, and the modern court system. Iran's oil revenue gradually became a very important source of income for the country's budget³⁵. According to the available data, Iran's oil revenue from 34.4 million

³⁴ Iranian Secular Parliament

³⁵ Ervan Abrahamian, *A History of Modern Iran*, p. 123.

dollars increased to 20.000 million dollars by the end of 1970s which turned Iran into a petroleum country³⁶.

Apart from oil and gas production, the Shah of Iran, Muhammad Reza Pahlavi flourished Iran's nuclear ambition once the country received technological assistance through the U.S. Atom for Peace program ³⁷(AFP). The mutual agreement between the U.S. and Iran was signed for further cooperation in civil nuclear and research activities under the supervision of the AFP. The personal interest of Shah in nuclear energy led to transformation of the Institute of Nuclear Science, which was under the Central treaty Organization (CENTO) among Iran, Iraq, Pakistan, Turkey and the United Kingdom, from Baghdad to Teheran.

In addition, Shah directly ordered for establishment of a research center for nuclear studies at the University of Teheran. During the 1960s, Iran arranged a purchase of a 5MW reactor for the research center at the University of Teheran from the United States. In the meanwhile, Iran was provided with hot cells which are heavily shielded rooms with remotely operated arms used to chemically separate material irradiated in the research reactor³⁸. The fuel for the research reactors was limitedly supplied by the U.S. to Iran. In the 1st of July 1968, Iran signed the Nuclear Non-Proliferation Treaty (NPT) and ratified it in 1970³⁹. Iran's ambition for further developments in atomic and nuclear facilities increased during the 1970s. During this decade, Iran signs various agreements with Denmark, Germany, France and India for nuclear developments and cooperation, but the Iranian revolution of 1979 changed the path of Iran's history.

³⁶ Fereidun Fesharaki, *Development of the Iranian Oil Industry*, (New York: Praeger, 1976), p. 132.

³⁷ See Daniel Poneman, *Nuclear Power in the Developing World* (London: George Allen & Unwin, 1982).

³⁸ Ibid.

³⁹ See Anne Hessing Cahn, *Determinants of the Nuclear Option: The Case of Iran* (Cambridge: Ballinger Publishing Co., 1975).

The Impact of Revolution on the Economy of Iran

The very first revolutionary action that influenced Iran's economy negatively was the attack to the United States Embassy on November 1979 in Teheran by some radical Islamists' group. The attack to the premise of the United States was not only unlawful and against the Vienna Convention on Diplomatic Relations (VCDR-1961) which grants diplomats, employee and the staff of embassy immunity and protection in the second country, but also obliges the countries who ratified the VCDR convention to protect the premises of embassy and its diplomatic agents against any domestic threats or harms in the hosting countries⁴⁰. But After the revolution, the Islamic groups with the leadership of Ayatollah Khomeini took the main control of domestic activities in the vacuum of central power in the country which led to unexpected attack to the U.S. Embassy in Teheran. The news of the crash into the U.S. Embassy immediately burst in the media around the world. The first image of the newly installed regime in Iran horrified the international community about the essence of regime and its impact on the regional and international politics, as well as energy security. David Patrick Houghton masterly defines the causes of hostage crisis in the *US Foreign Policy and the Hostage Crisis*, but here we are not striving to draw any conclusion about the rationality or irrationally of the regime in order to prove or disapprove its actions, rather we want to show the negative impact of hostile policies by the regime on Iran's economy. Therefore, the post-revolutionary actions that affected the political and economic dimensions of the country are the inputs- and impacts of them are the outputs of this paper.

Nowadays, Iran's political and economic roles have become not only the greatest concerns of the Middle Eastern countries such as Israel, Saudi Arabia, Turkey, Pakistan, and Iraq in the region but also the western countries. But in

⁴⁰ Vienna Convention on Diplomatic Relations, Article 22, Clause 2nd, the receiving State is under a special duty to take all appropriate steps to protect the premises of the mission against any intrusion or damage and to prevent any disturbance of the peace of the mission or impairment of its dignity.

order to understand deeply about Iran's today situation, as well as answering why Iran is under heavy sanction now? We need to go back in time when some group of Islamists attack the U.S. Embassy in Teheran and took the American diplomats for 444 days as hostages. Moreover, if one asks why this particular event in the post-revolution Iran is more important than others? I would answer probably because the hostage crisis was first important issue that occurs after the Iranian revolution.

Iran's undiplomatic and unlawful actions after the revolution which led to hostage crisis brought series of limitations upon the country's interest and economy. The very first counter act that hit Iran soon after the attack to the U.S. Embassy by the U.S. Department of The Treasury was "blocking Iranian government property"⁴¹ in November 14th of 1979. President of the United States, Jimmy Charter stated that the situation in Iran is unusual and extraordinary that threatens the national security, foreign policy and economy of the united Stated. Therefore, the President ordered to block all property, interests in property of the Government of Iran, and the Central Bank of Iran which are or become subject to the jurisdiction of the United States⁴².

In addition, The United Nation Security Council (UNSC) by adopting two resolutions (457, 461) expressed its deep concerns about the hostage crisis and stated that "dangerous level of tension between Iran and the United States"⁴³ may cause grave for International peace and security. Furthermore the Security Council called upon the Islamic government to release the personnel of the Embassy of the United States of America held at Teheran. But theocratic regime of Iran continued holding the personnel of the U.S. Embassy in order to

⁴¹ The U.S. Department of the Treasury, Executive Order NO. 12170, (Accessed 5.15.2015) <http://www.treasury.gov/resource-center/sanctions/Programs/Documents/Executive%20Order%2012170.pdf>.

⁴² Ibid.

⁴³ The Security Council Resolutions 1979, Resolution 461, Accessed 5.15.2015, <http://www.un.org/Docs/scres/1979/scres79.htm>.

realize their claim which was the extradition of the Shah, Muhammad Reza Pahlavi to Iran in exchange to diplomats.

The further restrictions upon the Islamic government regulated after the UNSC resolution of 461 which prohibited strictly the sale, supply or other transactions, by any individual subject to the jurisdiction of the U.S. except for food, medicine as well as supplies intended strictly for medical purposes, and donations of clothing intended to be used to relieve human suffering, from the U. S. or from any foreign country in the world, whether or not originating in the United States of America, either to or destined for Iran, an Iranian governmental entity in Iran, any other person or body in Iran or any other person or body for the purposes of any enterprise carried on in Iran⁴⁴. The relations of two countries since the Iranian revolution which occurred during the presidency of Jimmy Carter in the U.S. and the leadership of Ayatollah Khomeini entered into turmoil and tensions until now.

Causes and Motives of Initial Sanctions upon Iran

In order to have a clear image of the sanctions upon the Islamic Republic of Iran by the European Union (EU) and the United States in the recent years which shrunk Iran's economy enormously, we need to reverse the history to the point that western countries decided to suspend their trade with Iran in response to its "illicit"⁴⁵ nuclear ambitions. The western countries have imposed sanctions to prevent Iran's further progress in prohibited nuclear activities, as well as to persuade Ayatollahs to address the international community's concerns about its nuclear program. But Iranian officials repeatedly announced that their nuclear activities are only for peaceful

⁴⁴ The U.S. Department of the Treasury, Ex-Ord. No 12205, Accessed 5.15.2015, <http://www.treasury.gov/resource-center/sanctions/Programs/Documents/Executive%20Order%2012205.pdf>.

⁴⁵ The U.S. Department of State, Diplomacy in Action, "Iran Sanctions", (Accessed 1.06.2015), <http://www.state.gov/e/eb/tfs/spi/iran/index.htm>.

purposes⁴⁶ and nothing more than that. The long standing mistrust between Iran and western countries have made the situation even more complicated. The international sanctions upon Iran was mainly imposed by the United Nations Security Council, the United States, the European Union, Japan, the Republic of Korea, Canada, Australia, Norway, and Switzerland⁴⁷.

According to the European Union External Actions (EUEA), Iran's sanctions are imposed due to deep and serious concerns about unresolved disputes with Iran. The continuous refusal of Iran to co-operate and fulfill its international obligations under the monitoring of the International Atomic Energy Agency (IAEA) led to resolutions by the UN Security Council in 2006, 2007, 2008 and 2010 which are binding on all the UN member states⁴⁸. The EU members comprehensively implemented the United Nations' sanctions and adopted also a series of complementary restrictions upon Iran.

Moreover, the EUEA stated that the EU sanctions mainly targeted those persons and entities which are supporting the Iran's nuclear program and revenues of the Iranian government which were used to fund the atomic activities. Furthermore, the EU officials professed that the economic and financial sanctions are not aimed at the Iranian people but the government of Iran⁴⁹.

Although, the starting point of sanctions was the UNSC resolution 1696 on 31 July 2006 which expressed the grave concerns of International Atomic Energy Agency (IAEA) about Iran's nuclear program. The IAEA's report on 27 February 2006 (GOV/2006/15) stated that the agency cannot conclude there are no undeclared nuclear materials or activities in Iran that have no military

⁴⁶ British Broadcasting Corporations (BBC), "Iran nuclear crisis: Can talks succeed?" (Accessed 1.06.2015),

<http://www.bbc.com/news/world-middle-east-11709428>

⁴⁷ Ibid.

⁴⁸ the European Union External Actions (EUEA), "The European Union and Iran", Factsheet, Doc No. 140124/02, (Brussels; Published online 24.01.2014), p.1,

www.eeas.europa.eu

⁴⁹ Ibid.

dimension⁵⁰. But Iranian officials insisted that their unclear activities are only for peaceful purposes and have no military dimensions.

Ayatollah⁵¹ Khamenei, who is the most influential and powerful cleric in both domestic and external affairs of Iran, officially said that possessing nuclear bomb is contrary to our faith⁵² and he purported a fatwa⁵³ that possessing nuclear weapons are “*haram*”^{54,55}. But the very same person in another speech called for annihilation of Israeli State⁵⁶. Therefore, the severe concerns of International community about the unclear program of Iran are to some extent justified and understandable. Who can guarantee that Iran will not use the nuclear bomb if they will possess it? It is not hard to imagine what kind of disaster could happen in case of war with Iran. Over the past decades, the theocratic regime of Iran did not make any good impression in the international world due to its hostile nature. After the installation of Islamic government in Iran, the regime was repeatedly charged with the spread of political violence in the Middle East by funding and supporting the terrorist- and radical-groups in favor of Shiite Ayatollahs.

The violation of human rights by the Islamic regime would be on top of all other charges that they have been accused. In the latest reports of the United Nation Secretary General (UNSG) on the situation of human rights in the

⁵⁰ The United Nation Security Council (UNSC), Resolution 1696, adopted by the Security Council at its 5500th meeting, on 31 July 2006, S/RES/1696. (Accessed 1.06.2015), [http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/1696\(2006\)](http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/1696(2006))

⁵¹ Ervan Abraham translated ayatollah as high-ranking cleric which literally means “sign of god” in his book.

⁵² We can argue that “faith” is an undeterminable element of a believer person which cannot be examined or verified. Therefore, it would be hard to trust only the words of a leader who called for destruction of another country.

⁵³ E. Abraham translated fatwa as religious pronouncement.

⁵⁴ According to Almaany Arabic Dictionary the word haram means “Sinful deed” in Islamic doctrine.

⁵⁵ James S. Robbins, “Iran Nuclear Weapons Fatwa is a Myth”, the U.S. news, (Accessed 1.06.2015), <http://www.usnews.com/opinion/blogs/world-report/2015/02/18/irans-nuclear-weapons-fatwa-is-a-myth>

⁵⁶ Daniel Politi, “Iran’s Khamenei: No Cure for Barbaric Israel but Annihilation”, the Slates, (Accessed 01.06.2015), http://www.slate.com/blogs/the_slatest/2014/11/09/iran_s_khamenei_israel_must_be_annihilated.html

Islamic Republic of Iran which was published on 20 February 2015, the Islamic Republic was charged with various cases such as conducting death penalty unlawfully, imprisonment of human rights activists, violence and arrestment of women, restrictions on freedoms of expression and peaceful assemblies, abuse and discrimination of religious minorities and ethnics⁵⁷... etc.

It is not hard to imagine, if the Islamic regime which is empowered by the people tries to violate and breach the basic rights of its own citizens who granted the regime legitimacy then we probably can conclude that they are neither reliable nor accountable for their actions in the International world too. If the regime has no responsibility for its own people and does not respect the basic rights as human beings, then how could we expect from the regime to respect other nations or people? I am afraid if the Islamic regime gains more power and accommodations in the future, they would act according to their natural instincts and use violence against humanity cause at the end of the day dictators remain dictator.

Therefore, one of the ways to limit the illicit activities of undemocratic regimes such as Iran is to minimize their incomes and accessibility which automatically decrease their power as well in the international world. In the twenty-first century, the most effective and cost-worthy ways to implement those counter activities are applicable by imposing sanctions, embargos and other economic barriers upon a given country. The Islamic regime is not an exception in this regard, one of those countries that hit by thunder and lightning of the international sanctions due to its ambiguous nuclear activities was Iran.

Sanctions and Restrictive Measurements in Force

As it was mentioned here, the international community consists of the European Union, the United States, and other countries agreed to impose

⁵⁷ Iran Human Rights Documentation Center, UN reports, (Accessed 1.06.2015), <http://www.iranhrdc.org/english/human-rights-documents/united-nations-reports/un-reports/index.1.html>

sanctions upon Iran due to its unclear nuclear activities. The restrictive measurements of those sanctions are different from one another, therefore it would be useful for our further evaluation to go through few items briefly for the sake of deeper understanding about the negative impacts of international sanctions over Iran's economy and trade which were imposed to halt the enrichment of uranium⁵⁸ in high percentages (20%>0) by the Islamic Republic.

The so called P5+1 which are the five permanent members of the U.N. Security Council (United States, the U.K., France, China, Russia) and plus Germany have tried to persuade Iran to resolve the existing disputes with the IAEA in a more diplomatic way, but Iran refused to co-operate with the agency and western countries which ultimately brought the financial and economic sanctions and embargo on Iran's arms and related materiel, dual-use goods and technology, certain goods and technological equipment which could contribute to enrichment-related and reprocessing or heavy water-related activities or the development of nuclear weapon delivery systems, as well as other items that the IAEA has expressed its concerns⁵⁹ about.

The EU strict restrictions and sanctions not only included Iran's nuclear activities but also prohibited of procurement from Iran any arms or related materiel, selling key equipment and technology for the oil and natural gas industries, banned provision of certain services to the oil and natural gas industries, banned certain investment in the oil and natural gas industries, restricted transfers of funds to and from Iran, restricted establishment of branches and subsidiaries of and cooperation with Iranian banks, restricted

⁵⁸ According to the World Nuclear Associations (WNA) "natural uranium contains 0.7% of the U-235 isotope. The remaining 99.3% is mostly the U-238 isotope which does not contribute directly to the fission process (though it does so indirectly by the formation of fissile isotopes of plutonium). Isotope separation is a physical process to concentrate ('enrich') one isotope relative to others. Most reactors are Light Water Reactors (of two types – PWR and BWR) and require uranium to be enriched from 0.7% to 3% to 5% U-235 in their fuel", (Accessed 2.06.2015), <http://www.world-nuclear.org/info/nuclear-fuel-cycle/conversion-enrichment-and-fabrication/uranium-enrichment/>

⁵⁹ European Commission – Restrictive measures in force (Article 215 TFEU), "Council Decision 2010/413/CFSP" (OJ L 195, 27.7.2010), (Accessed 2.06.2015), p. 39. http://ec.europa.eu/geninfo/legal_notices_en.htm

provision of insurance and re-insurance, restricted issuance of and trade in certain bonds vigilance over business with Iran⁶⁰ and etc. In short, Iran's petroleum industry, banking and trade system, and other non-oil sectors were sanctioned by the EU, the United States and other countries in favor of sanctions against Iran. The country after a year started to suffer from the impacts of sanctions.

The Impact of Sanctions

Based on the World Bank (WB) statistics Iran is a second largest economy after Saudi Arabia in the Middle East. Iran is one of the major oil producers and gas exporters of the region. Therefore, the Islamic Republic of Iran is relatively vulnerable to well-targeted sanctions on the oil and gas industries⁶¹. Iran's highest export revenues come from the natural resource such as oil, gas, and other petrochemical products. Therefore, the imposed sanctions on Iran's petroleum, banking system and other non-oil products paralyzed the country's economy to the extent that Iran accepted the Joint Plan of Action (JPA). But before we uncover Iran's reason of accepting the JPA talks, let's evaluate the impact of economic and financial sanctions on Iran's economy so far.

The first impact that we could observe after the International sanctions upon the country was a decline in the gross domestic product (GDP). The economic and financial sanctions shrunk Iran's economy up to 15% ~ 20%. Many private businesses have failed to continue or bankrupted shortly after the full implementation of sanctions upon Iran's market. The number of non-performing loans held by Iranian banks increased to 15% ~ 30% and many employees in the private sectors lost their jobs and gone unpaid. The unemployment rate increased to 20% ~ 25%, although the Islamic government

⁶⁰ Ibid.

⁶¹ Yitzhak Gal & Yair Minzili, "The Economic Impact of International Sanctions on Iran", Herzliya Conference, Feb. 2011, (Accessed 2.06.2015). p. 2, http://www.herzliyaconference.org/_Uploads/dbsAttachedFiles/YitzhakGalYairMinzili.pdf

reports the rate at ~13%⁶² which is very low to the actual unemployment in the country.

The second impact of sanctions appeared in the oil sector. Iran's export and production of crude oil declined to the extent that the revenue from oil decreased from 100\$ billion dollars in 2011 to ~35\$ billion dollars in 2013. This amount shows approximately ~60% downfall in Iran's income. Before the sanctions, Iran exported ~2.5 million barrels crude oil to the European Union (particularly Italy, Spain, and Greece), China, Japan, India, South Korea, Turkey, Malaysia, Sri Lanka, Taiwan, Singapore and other countries per day but after the sanctions this amount decreased to only ~1.1 million barrels per day which is a significant amount of decline by the end of 2013⁶³.

After the international sanctions upon Iran's economy, the foreign consumers and buyers of Iran's crude oil ought to reduce their dependency on Iran's exports and change their supplier to another oil-producing country. Reduction of oil export caused a great loss in the annual revenue of the regime which was one of the main sources of the governmental budget due to Iran's single market economy. Iran lacks competitive manufacturing both in private and public sectors to prevent the expansion of the Dutch disease in the country's economy. The Islamic regime has been unsuccessful to reduce its dependency on natural resources, so almost after the four decades of full control over's Iranian oil and gas, the county is still runs with oil money. Therefore, we could probably guess that after the international sanctions upon Iran's oil industry, a great crisis would occur in the domestic market.

Another impact of the financial and economic sanctions appeared in currency exchange rate. Both depreciation and inflation unbalanced Iran's market and economy. The Iranian *Rial* lost two-third of its worth within 2 years. The official exchange rate of Rial to Dollar was ~12,175 R to 1 \$ in 2011, but due to the International sanctions the Rial lost most of its value. The current official

⁶² Kenneth Katzman, *Iran Sanctions*, congressional Research Service, (Accessed 2.06.2015), <https://fas.org/sgp/crs/mideast/RS20871.pdf>

⁶³ *Ibid.*

worth of Iran's Rial per Dollar is ~ 28,950 R per 1\$⁶⁴. According to the Iran's Central Bank, the time line of inflation rates in 2010, 2011, 2012, 2013, and 2014 orderly were 12.4%, 21.5%, 30.5%, 34.7%, and 15.6% in annual scale⁶⁵. The numbers show the enormous amount of inflation in Iran's economy after the economic and financial sanctions.

So, as we can see from the above statistics and numbers on Iran's situation after and before the international sanctions, we can derive that the sanctions were effective enough to decrease and reduce Iran's income and ability to continue its nuclear activity. Of course, during this period, Iran also has tried to find a way to ease the pressure of the sanctions on its economy by finding new trade partners whom are willing to co-operate with Iran. As we mentioned before, Iran has tried to change its partnership in order to cover up the lack of import in its market after the sanctions. Iran's foreign trade naturally switched to those countries that did not implement the sanctions very strictly such as China, Russia, the United Arab Emirates (UAE), and etc⁶⁶. Iran gradually increased its trade partnership with the UAE to reduce the precision of sanctions by using the UAE ports to import the essential needs. The UAE has become Iran's bridge to the world economy.

According to statistics from the UAE ministry of foreign trade, Iran's volume of imports raised from ~1.5\$ billion dollars in 2001 to \$8.5 billion dollars by the end of 2011⁶⁷ which shows Iran's interest in the UAE ports to escape from strict economic and financial restrictions. After the sanctions, Iran started to import its basic needs without conducting direct trade with the supplier and consumer but to use re-export and re-import from the UAE and other neighboring countries which did not apply the sanctions as severely as the others did. Basically, when we think of Iran's available options after the sanctions we

⁶⁴ The Central Bank of Iran, (Accessed online 3.06.2015), www.cbi.ir/ExRates/rates_fa.aspx.

⁶⁵ Ibid.

⁶⁶ Nader Habibi, "The Impact of Sanctions on Iran-GCC Economic Relations", Crow Center for Middle Easter Studies, Brandies University, No 45, published November 2010, Accessed 2.05.2015, <http://www.brandeis.edu/crown/publications/meb/MEB45.pdf>

⁶⁷ Karim Sadjadpour, "The Battle of Dubai", the Carnegie papers, published July 2011, (Accessed 02.06.2015), http://carnegieendowment.org/files/dubai_iran.pdf

could realize the regime had few options to choose. One was to deny the further co-operations with the IAEA and international community about its ambiguous nuclear activities or to accept the Joint Plan of Actions and start cooperating with IAEA and Western countries.

Conclusion

There are some presumptions that we should take it into consideration when we are thinking about the post-sanction of Iran and the country's foreign policy. Firstly, the Islamic regime of Iran will start to tackle its current financial and economic problems that mainly were caused by the international sanctions with increasing the oil production in the global market. The oil money means that the regime will gain higher income or revenue from its natural resources. As a result, Iran's revolutionary-based foreign policy will be reactivated once again in the region. In addition, the Iran's regime will try pursuit its former foreign policies which were based on revolutionary ideas in the Middle East. Also, the conservative groups close to the main power will try to push the reformists groups out of the political decision making process. In addition, the cycle of power struggle in Iran have proven this fact that whenever the oil revenue increases the radical groups have higher opportunity to hijack the political power and marginalize the reformists groups. Although Iran's political red lines have been changed since the very beginning of the negotiations with P5+1 for mutual agreement on Iran's nuclear program, but still we should not underestimate other internal factors that influence the foreign policy of Iran. For instance, the role of Ayatollah Khamenei in the political hierocracy of Iran, the political tendency of current President *Hassan Rouhani* which was supported by reformist groups, and last but not least other interests groups such as Sepah-e Pasdaran (IRGC), ruling elite and individuals. In fact, the outcome of all these decision makers will affect the foreign policy of Iran in short- and long-term. Last but not least, it is important to bear in mind that Iran may fulfill the requirements to survive or escape

from the status quo but it does not mean the essence of Islamic Republic would change or alter in anyway. The regime's willingness to become a nuclear power will remain under the ashes.

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