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The Keynesian Root of the Tobin tax

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Abstract

This paper is an attempt to evaluate the strength of the link between the Tobin tax and the so-called Keynes tax, i.e. a tax on security transactions suggested by Keynes in Chapter 12 of the General Theory. Starting from a literal comparison of the two projects, this work analyses the possibility of a common methodological background. It supports the idea that the two measures share similar fundamental targets, despite displaying technical diversity.

JEL Classification: B31, E62.

Keywords: Tobin tax, Keynes tax, security transaction taxes.

1. Introduction

Much of the debate surrounding the Tobin tax involves questions like: is it a good instrument to fight international financial instability? Is it an effective way to enable national political economy authorities greater margins of discretion in a context of increasing globalisation? Would it be feasible in practice? And so on. While recognizing the fundamental value of these questions this paper addresses none of them, drawing the attention to another path of considerations: the purpose of this paper is to assess the degree of connection between Tobin's proposal of a tax on short term international financial transactions and Keynes' original work, as especially expressed in the General Theory and in the contributions related to the development of Bretton Woods Agreements[1]. Such choice of focus may suggest a major interest in the field of history of economic thought. But the final end of this analysis is not simply to reach a point of historical clarity. It is in fact opinion of the author that the effort to relate different pieces of economic theory in a historical perspective is also a useful step towards a better understanding and composition of present economic puzzles and controversies.

Clearly nobody disputes that Tobin was a Keynesian; accordingly to his own definition given in the Journal of Economic Perspectives 1993[2] he was an "Old" Keynesian as opposed either to Post Keynesians and New Keynesians. Then it would not be surprising at all to find that there might be some important differences between Tobin and the positions expressed about a security transaction tax, for example, by Paul Davidson, or by Joseph Stiglitz[3]. On the other hands such differences may not apply directly to the relation Keynes-Tobin.

In order to evaluate the strength of the link between the Tobin tax and the so-called Keynes tax, the paper develops as follows. First a definition of the two measures is given just in order to assess their *vis-à-vis* similarity. Although the taxes may neither apply to the same object, nor share the same organizational scheme, they may still have a common root. As a consequence, the second part of the analysis is devoted to illustrate precisely whether it is possible to find this joint origin by referring to the target of the taxes. Conclusive remarks end the paper, as usual.

[1] Particular attention is given to vol. XXV and XXVI of John Maynard Keynes Collected Writings, Cambridge University Press, 1980.

[2] Tobin J. "Price Flexibility and Output Stability: An Old Keynesian View", Journal of Economic Perspectives, vol. 7 n.1, Winter 1993, pp. 45-65.

[3] The interested reader may deepen the argument comparing, for example, Davidson (1998), (1999), (2000) and Stiglitz (1998), (2002). A further discussion of Davidson's position is presented in the third section of the paper. At risk of being very short one may anticipate that Davidson's criticism relates to the fact that Tobin tax does not reach its main target of preventing international financial crises. On the other hands, Stigliz's support comes from the recognition of the Tobin tax as an instrument to raise revenues for international purposes, which is just an indirect purpose in Tobin's original proposal.

2. The definition of Tobin tax and Keynes tax: *prima facie* connection

While Tobin explicitly defined a measure to prevent disruptive financial crises[4], Keynes just indirectly mentioned it, while discussing the role of long-term expectations.

In his contribution of 1978[5] Tobin wrote:

> "The proposal is an internationally uniform tax on all spot conversions of one currency into another, proportional to the size of the transaction".

Whereas, Keynes' suggestion comes from the passage written on pages 159-160 of the *General Theory*[6]:

> "…It is usually agreed that casinos should, in the public interest, be inaccessible and expensive. And perhaps the same is true of Stock Exchanges. That the sins of the London Stock Exchange are less than those of Wall Street may be due, not so much to differences in national character, as to the fact that to the average Englishman Throgmorton Street is, compared with Wall Street to the average American, inaccessible and very expensive. [...] The introduction of a substantial Government transfer tax on all transactions might prove the most serviceable reform available, with a view to mitigating the predominance of speculation over enterprise in the United States".

Though the taxes have the same nature, both implying higher transaction costs in the financial markets, it is quite clear from a literal comparison of the definitions that Keynes tax and Tobin tax do not apply to the same objects. In fact Keynes suggested a broader tax affecting all transactions taking place inside the Stock Exchange, and his idea was to apply it at national level. At the opposite, Tobin tax is supposed to affect just international short term financial transactions. Furthermore there is a different emphasis on the role played by time horizon of the taxes: Tobin explicitly draws the attention on short term transactions, making the time horizon an object of tax design; in contrast, Keynes does not make any distinction about the term of transactions; hence, at best, the time horizon enters in Keynes' considerations as an indirect effect of taxation: the shorter the term of transaction, the higher the incidence of the tax and the higher the adverse incentive effect against short term deals.

Such differences imply alternative schemes of tax design and enforcement, but also relevant differences in the potential impact of the tax on the working of economic systems[7].

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[4] This is not the only purpose of the Tobin tax: for a deeper discussion of the point see the next section.

[5] The definition is taken from the article "A Proposal for International Monetary Reform" published on the Eastern economic Journal, vol. IV, n. 3-4, July-October 1978, pp. 153-159. On the other hands the idea was suggested for the first time in 1972, in the Janeway Lectures Tobin gave in Princeton, lately published as "The New Economics One Decade Older", pp. 88-92, in 1974.

[6] John Maynard Keynes, "The General Theory of employment, interest and money", (1936) reprinted by Harvest/HBJ Books, Harcourt Brace Jovanovich Publishers, first edition 1964.

[7] The interest reader may find good summarization of the various criticisms against the Tobin tax, for example, in Frankel (1995)(the paper appears also in Ul Haq et al., 1996), and Garber and Taylor (1995). Also Ormerod (2001) is an example of the most recurrent critiques to Tobin tax. But it is a quite open to criticism example of instrumental use of pieces of economic theory in order to support "faith" instead of scientific ideas. In contrast, a

The three elements of design, enforcement and impact all relate to the question of technical feasibility[8]. Let us consider at first the design-enforcement issue.

It is undisputable that because of its nature Tobin tax potentially poses greater organizational problems than Keynes tax. Often the criticism addressed to the Tobin tax relates to its international nature. It is possible to illustrate how such criticism, from a purely theoretical point of view, is somehow overstated.

Even though a complete discussion of the aspects related to the Tobin tax feasibility goes far beyond the scope of the paper, a couple of points deserve at least a little discussion[9].

The complexity of real world often hampers the attempts to separate the effects of independent causes, while the same does not happen in the realm of abstraction. As a consequence, as far as real world goes, there is no doubt that the intertwined influences of technical, political and institutional aspects make a project of a Tobin tax more difficult to organize than a Keynes tax. But in a purely theoretical world, there is no reason to draw the same conclusion relating to the international/national juxtaposition. Whether a national tax is easier to work out than an international one, mainly depends on political and institutional considerations, which in their turn depend on the solution of a complex social game involving heterogeneous agents (or players). Historical observation confirms that both Keynes proposal in Bretton Woods and Tobin tax, had little success because of political opposition. But there is no theoretical reason to say that such a solution is easier to find or maintain at national level than at international one. In order to reach this clear cut conclusion one may start from assumptions such that either a higher number of players implies higher individual heterogeneity and this is a sufficient condition (i) to hinder cooperative results, (ii) to lead to "inferior" competitive

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comprehensive book illustrating the merits of the Tobin tax is Michalos (1997). Explicitly against Neoclassical Economics, and consequently in favour of the Tobin tax is also Patomaaki 2002. Support towards the Tobin tax through an empirical investigation on the effects of recent international financial crises is Hayward (2001). Books expressing both favour and criticism are Ul Haq et al. (eds.) (1996), and Bellofiore and Brancaccio (eds.) (2002).

[8] Here we specify the word "technical" in order to separate the mentioned elements from political considerations. Clearly it may well be the case that political reflections make practically unfeasible, technically feasible taxes.

[9] The issue of feasibility is expressed in Palley (2001). The paper examines the case for the Tobin tax, arguing that it is both desirable and feasible. It develops presenting an intellectual and historical background, but also presenting the evidence of recent behaviour in the New York Stock Exchange. The point of feasibility is explained in detail addressing the critiques against the Tobin tax focused on problems such as "avoidance through jurisdictional shopping" and "avoidance through changed product mix". One can also refer to Michalos (1997), and Patomaaki (2000). Pollin, Baker and Schaberg (2001) is a very well articulated paper presenting the theoretical case in favour of Securities Transaction Taxes (STETs) for US financial markets. It faces the arguments usually raised against this kind of measures, and develops the reasons to support them. It is interesting also because it present an extensive review of the empirical literature devoted to analyse the success of STETs.

equilibriums[10], or national coalitions between players are more stable than international ones[11]. If one sets aside these assumptions there is no basis to consider Keynes tax in any way superior to Tobin tax, from a technical point of view.

Nonetheless the real weakness of Tobin tax, even at pure level of abstraction, is the correct individuation of the taxable income: while Keynes tax individuate a target (reduce speculative transactions taking place in the Stock Exchange) and a precise taxable income (all the transactions inside the Stock Exchange at the time Keynes wrote the *General Theory*), Tobin tax has a target (reduce speculative transactions) without an as much well defined taxable income. Nowadays, in fact a number of international speculative transactions do not pass through the stock exchange, it slips official controls and it would likely avoid any form of taxation.

Then the flaw of Tobin tax compared to Keynes tax, at organizational level, is due to the fact that financial markets are more sophisticated and liberalized now than fifty years ago, and hence the design/enforcement of taxes (either national or international) is more complex than in the past.

Although the empirical evidence does not stand as a clear case against the Tobin tax, their opponents refer to it as an inefficient, improper, implausible and unfeasible measure[12]. It is possible to find examples in the economic literature, but such ideas are very well supported even outside the profession, where it can be found:

> "While ICC (*International Chamber of Commerce*) considers that greater stability of financial markets is desirable, it also believes that a Tobin tax would be *harmful* to international trade, economic growth and welfare, and business throughout the world. […] The tax would *not prove feasible* in practice since it would require uniform implementation throughout the world, and would need to encompass not only spot transactions but also substitutes and supplements such as currency swaps, forwards and futures in order to limit evasion. […] To a large extent, the high volume of the transactions reflects genuine needs to cover currency risks and spread the risks among different participants in the exchange market… […] A consequence of a Tobin tax would be to reduce short-term trading. But there would be no guarantee that exchange rate volatility wouldn't diminish because liquidity would also diminish. […] A Tobin tax would not prevent speculative attacks on a currency where expected gain might be high, not unusually 10 per cent or more over a week. Furthermore, a tax could neither rectify nor repair unsustainable economic policy, which more often than not is the main reason why a currency comes under attack. A Tobin tax would prove to be

[10] Using the term "inferior" we imply a variety of games where the equilibrium does not exists, it exists but it is not unique nor stable, it is unique but unstable, it is unique and stable, but in a dynamic context, it requires a longer time to be reached (and hence lower satisfaction for players).

[11] An example may be useful to clarify the concept. Imagine to propose a new law inside two different scenarios. Scenario 1: the Commonwealth of the 19th century; Scenario 2: the former Yugoslavia just right before the civil war. It is quite difficult to say that the probability of success of the proposal is higher inside scenario 2, because it relates to a national dimension.

[12] Such features have been clearly stated also by Fabrizio Onida in his intervention at the Conference held at the University of Bergamo on December 13th 2002, which preceded the publication of the present book.

why a currency comes under attack. A Tobin tax would prove to be *impracticable* since it would require worldwide coverage, or at least coverage encompassing G10 countries, supplemented by a penalty on transactions to tax havens. […] ICC notes that Professor Tobin today is no longer a proponent of the tax that bears his name, inter alia because the currency regime is now very different from the time when he originally proposed the tax and because he supports free trade as an instrument for raising welfare throughout the world".[13]

We can now turn back to the consideration of the impact of the taxes. It clearly appears that the differences between the two measures relate to their own effectiveness. It is in the nature of the game between authority and individuals that any tax will produce avoidance and evasion (that is, both legal and illegal behaviours directed to escape the tax). While, to a certain extent, avoidance is a sign of tax effectiveness, evasion is just the opposite. In the light of previous considerations, one cannot deny that a project of a Tobin tax needs a more careful design in order to find a correct balance of the potential effects as opposed to the Keynes tax[14]. In this respect, the following passage taken from Palley (2001) pp. 86-87, seems a very good statement:

"Reflections on the issue of enforcement, evasion and avoidance that surround the Tobin tax raise critical technical questions. But beyond these questions, such reflection also raises deep issues of principle regarding the purpose and conduct of public policy. One critical issue concerns the significance of problems of enforcement, avoidance, and evasion in the assessment of tax system. Critics argue that these problems make the Tobin tax infeasible. […] However, beyond that contention there is the core point of principle that evasion and avoidance are not decisive in determining whether a tax is warranted. Every tax system is subject to some evasion and avoidance, and the extent of such behaviours is an appropriate concern. But such behaviours are only part of the decision calculus. Also relevant are the amount of needed revenue that the tax raises and the behaviours it discourages. This is the test that should be applied to the Tobin tax – just as it should be for all tax systems – and on this test the Tobin tax scores well. There is an even broader principle concerning the nature of regulation in a dynamic global economy. Critics of the Tobin tax argue that financial markets will innovate to avoid it. […] Over time financial markets will undoubtedly innovate in directions that evade a Tobin tax – as it might be imagined today. But this not invalidate the case for a Tobin tax. Instead it affirms the fact that regulation is an ongoing process – a dynamic game played between regulators and regulated – that needs to be continually updated. Sometimes regulators manage to get ahead of the game, and other times they just manage to stay even. However, there is never an excuse for capitulating and surrendering the public interest to the dictates of the markets".

Similar implications are subsumed by Tobin himself in his declaration:

I don't intend to add even a small barrier to trade. But I see offhand no other way to prevent financial transactions disguised as trade. […] Doubtless there would be difficul-

[13] International Chamber of Commerce, "The Tobin tax. A business viewpoint", Corporate Economists Advisory Group, 14th December 2001 (italic added).
[14] The issue of political opposition to the Tobin Tax is suggested in Grieve Smith (1997), and Patomaaki (2002). The theme of evasion may be deepened in Ul Haq et al. (1996).

> ties of administration and enforcement. Doubtless there would be ingenious patterns of evasion. But since these will not be costless either, the main purpose of the plan will not be lost[15].

The brief outline of literal and technical features of Keynes and Tobin tax has shown that the two measures are not strictly the same. They may, at most, be considered complementary[16] either with respect to the jurisdiction where they find application, and to the taxable income they hit. The search for a common root needs to move to a deeper level of analysis. A scope we try to pursue in the next section.

3. The target of Tobin tax and Keynes tax: methodological connection

In order to evaluate this type of connection one has to answer the question: do the taxes share the same goal? The answer proposed in this paper develops in three parts, according to three different types of objective a tax may have[17]:

1. **general or primary objective (efficiency)** which is the main reason why the tax is raised; often behind the tax there is an attempt to restore efficiency in the economic system. Given that the system shows a certain number of imperfections, the intervention of the State is meant to improve its working. From the point of view of positive economics, a tax comes to existence only when the related cost and benefit analysis leads to an increase of social welfare;
2. **secondary objective (effectiveness):** in this case the attention of the Authority is focused on effectiveness and more specifically onto the fact that any economic policy, in order to be effective needs the correct choice of instruments to reach its targets. Differently from targets, the set of possible instruments is affected by institutional choices. For example, it is a well known stylized fact that a change from a system of fixed exchange rates, to a system of flexible exchange rates, or a change from a system allowing just free exchange of goods to a system allowing also free exchange of capitals, inhibits to different extents the use of fiscal policy or monetary policy as instruments to stabilize the level of aggregate output. Consequently, from the point of view of those who support the idea that output stabilization is a primary objective of economic policy, instruments like the Tobin tax may be useful to restore a (small)

[15]James Tobin "A proposal for international monetary reform", Eastern Economic Journal, vol. IV n. 3-4, 1978, p. 159.

[16] Further developments of the point may be found in Crotty and Epstein (1996), Crotty (2000) and Pollin, Baker and Schaberg (2001).

[17] The proposed taxonomy does not mean to be valid in general, nor exhaustive. It has just to be intended as instrumental to the scope of the paper.

margin of discretion in the fiscal policies of nations operating in a system of flexible exchange rates and perfect capital mobility;

3. **indirect objective (equity):** most of the taxes meant in principle to restore efficiency do not simply have an effect of positive type**,** they also alter income distribution according to some agreed upon social-political principle. Behind this target there are only distributive arguments, and hence normative considerations. In the case of a tax designed to overcome allocation distortions, the indirect objective has to be taken as the minimum requirement the tax must satisfy; in other words it is the target to be attained even though the other objectives fail to be reached.

In a recent contribution Bellofiore and Brancaccio (2002) summarized the targets of the Tobin tax as follows:

> 1) reduce speculative capital flows, and not hinder real commerce; 2) allow compatibility between flexible exchange rate systems and small degrees of discretion in monetary and fiscal policies at country level; 3) grant to governments the possibility to collect high amounts of taxes shifting the burden from labour to capital[18].

More in general the case for capital controls is stated in the paper by Crotty (2000) where he supports the idea that such controls may help in the resolution of three major problems of nowadays capitalistic economies: 1) reduce the occurrence of speculative boom-bust cycles damaging economic growth; 2) increase the possibility for governments to return to expansionary budgets and interest rates policies; 3) increase the economic power of developing country governments. His main idea is that the tax system is a sufficient tool to restore efficiency[19].

Such ideas are reinforced and supported by both historical and theoretical analysis in Crotty and Epstein (1996). There, Tobin tax and Keynes tax are conceived as a first step towards a globalized system of capital controls in order to have an improvement of global conditions. The authors stress the existence of a political constraint against the measures, and quote empirical contributions showing that the abandonment of capital controls was basically due to distributive arguments, and in particular to the fact that such controls where shifting distribution in favour of labour[20].

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[18] Bellofiore R. and Brancaccio E. "Il granello di sabbia. I pro e i contro della Tobin tax", Feltrinelli Attac Italia, 2002, page 27. Translated from the original.

[19] One may observe that such position is quite different from Davidson's. This underlines the fact that even among Post Keynesians there is no unique position with respect to the best measure to control international financial instability.

[20] Another example of the use of the Tobin tax as instrument to shift the tax burden from capital to labour is Baker (February 2000).

Let us try to examine these targets with respect to the Keynes tax and Tobin tax, in major detail.

3.1. Target 1: Efficiency

There is no doubt that both Keynes and Tobin had in mind exactly the same idea. Even a very superficial inspection reveals that behind the tax there was the need "**to limit financial speculation which is the source of aggregate instability**"[21].

This sentence is full of significance because it states the difference between the Keynesian approach and the alternative ones (Neoclassical especially). In fact the emphasis is on financial speculation and on instability, whose link holds only under very specific assumptions such as:

a) laws of mechanical type do not apply to the economic system (in other words the system dos not possess an objectivistic structure). In terms of probabilistic representation the data generating processes of economic events is not ergodic, or stable. Then the dynamics of capitalistic systems may be driven by unpredictable behaviours; among them there are subjective behaviours that may be characterized by sudden changes from stability to instability. This implies the assumption of fundamental uncertainty as a phenomenon methodologically different from risk (or objectivisic uncertainty)[22].
b) Economic system is not considered at all a self-regulating mechanism leading to dynamic equilibrium (i.e. to efficient outcomes); the Invisible Hand fails to create the coordination between individual self-interest and macroeconomic efficiency.
c) From assumptions (a) and (b) comes that economic system has an endogenously dynamically unstable nature[23]. As a consequence, speculative activities, consisting in purchases and sales against the market, may produce undesirable effects, and instead of being the instrument to restore a balance between demand and supply, they drive the market away from equilibrium. Similar effects may be produced by price flexibility[24].

[21] See Tobin (1978), (1996), (1999).
[22] It has to be underlined that the methodological difference does not imply also a difference in the empirical representation. In the limit case of a system where conventional wisdom holds for a very long time and economic conditions are no subject to sudden and continuous change, the use of stable probabilistic structures would be the best empirical approximation of the working of the system.
[23] Again a word of caution has to be spent. The attention to endogenous instability does not imply that the system is affected only by endogenous perturbations. It simply contemplates a broader set of possible causes of instability, some of which are neglected in the Neoclassical approach, and more precisely the endogenous ones.
[24] See Tobin (1993) op. cit..

d) Inside developed capitalistic systems, financial markets and institutions are powerful means to foster economic expansion; real and financial sides of the economy are not independent, but affect each other. This is equivalent to say that the neoclassical dichotomy does not hold, and more important that activities taking place in the financial side may become the **source** (no more a simple transmission mechanism) of aggregate instability[25].

Both Keynes tax and Tobin tax lead to an increase in transaction costs, hence both are supposed to reduce the amount of transactions. But, would they be able to reach the main target, being the reduction of instability? This is a question often raised against the Tobin tax. There is no clear evidence on the direct effect. Nevertheless one may suggest that, at least indirectly, the tax would reach its goal: on the verge of a massive speculative attack, let's say against a currency, a reduced amount of transactions would give the Central Bank a higher opportunity to make the market and then to resist to speculation and its vicious effects.

Interesting developments of this point may be found in Arestis and Sawyer (1997), Pollin (1999), Grabel (2002) and Jeanne (1996). The first contribution studies the potential effectiveness of Tobin tax proposal. The authors especially concentrate on the effects of exchange rates volatility. They quote a number of empirical contributions where it is not possible to draw the conclusion that exchange rate volatility dampens economic activity (unless it is very high, and at levels not observed historically). They are in favour of the positive effect of a Tobin tax reducing exchange rate volatility, subscribing the idea of not ergodic financial markets[26].

Grabel's paper (2002) is an interesting contribution as it underlines the existence of different types of risks connected to international financial markets operations. She enumerates five risk categories, namely: 1) currency risk, 2) flight risk, 3) fragility risk, 4) contagion risk, 5) sovereignity risk. Those risks interact deepening and diffusing financial crisis. Tobin tax, Keynes tax and other measures are evaluated according to their possibility to face all these type of risk. The author concludes that security transaction taxes (even combined, and more sophisticated than in the original proposals) have a limited impact because they affect just a subset of risks; hence any attempt to face international financial crisis has to consider a number of coordinated measures and instruments apt to control the different risks altogether.

[25] This aspect is treated in major detail in the following pages.

[26] See the next paragraph on the issue of raising political autonomy expressed in the paper.

Jeanne (1996) is a theoretical and empirical investigation on the stabilizing effect of the Tobin tax, applied to the specific case of the EMS in the '90th. It supports the Tobin tax, but more in general it is in favour of capital controls.

Another open question is whether the Tobin tax would be a valid instrument to avoid financial crises. We have mentioned Grabel (2002) as an example of negative answer, but the point especially brings to a Post Keynesian critique to the Tobin tax, mainly expressed by Davidson (1997),(1998), (1999), (2000)[27].

According to Davidson, measures such Tobin tax are useless in order to control, or to prevent the endogenous instability typical of capitalistic systems. The explicit reference to fundamental uncertainty is the basis to suggest more radical intervention measures, such drastic changes in the design of financial institutions. But it is also a way to underline that behind speculative attacks there are deep differences in the underlying real economies involved in speculative waves.

Davidson expresses two kinds of critiques. The first addresses to the theoretical foundation of Tobin tax: according to Davidson, the tax would not hinder speculation but arbitrage (which is beneficial to economic activity); in fact arbitrage is affected by the length of the time horizon of the deal, while speculation is not[28]. Furthermore:

> "The grains of sand Tobin tax might be straw that breaks the speculative back of very small portfolio managers, since normal transactions costs of foreign transactions are essentially regressive (cf. Hicks, 1967, p. 67). An additional proportional (Tobin) tax on top of large regressive transactions cost can keep small speculators out of the market. For movements of larger sums, however, the normal transactions costs quickly shrink to a negligible proportion of the total transaction. Since in today's free-wheeling financial markets, individuals with even small portfolio sums can join mutual funds that can speculate on foreign currencies, however, a Tobin tax is unlikely to constrain even small investors. […] Finally, there is a rule of thumb that suggests that under the current flexible exchange rate system, there may be four ore more normal hedging financial transactions involved in any single arms-length international trade transaction.
> […] … the important principle involved here is that as long as some hedging transactions are required on arms-length real trade flows, the impact of the Tobin tax is likely to be at least as large and probably larger on international trade than on international portfolio flows".[29]

[27] In the same vein see Halevi (2000) reprinted in Bellofiore and Branaccio (eds.)(2002), op. cit..

[28] Davidson (1997). This position was underlined by Hicks (1935), "A suggestion for simplifying the theory of money", Economica v. 2, pp. 1-19; and by Kahn (1954), "Some notes on liquidity preference", Manchester School v. 22, pp. 227-45.

[29] Davidson (1997) pp. 678-679.

The second critique is practical: while Davidson proposal implies to come back to fix currency exchange rates, Tobin does not prefer definitely this system to flexible currency exchange rates, recognizing that both have benefits and limitations[30].

All these points are largely correct. They are also a way to state the difference between Post Keynesian approach to Economics as opposed to the alternative schools of thought. The emphasis on comparison between different schools' approaches is common to a number of recent papers, exposing contrasting evaluations of the theoretical relevance of Tobin's and Davidson's positions on the issue of international financial instability. On the neutral side, an interesting perspective is expressed in Alves, Ferrari and De Paula (2002)[31]. The paper illustrates the recent developments in the theory of currency crises models and underlines the differences between the mainstream approach and the Post Keynesian view, as articulated by Davidson position and his proposal to reform the international monetary system. It is relevant to the present work as it indirectly shows the reasons connecting Tobin and Keynes, Davidson and Keynes, and in contrast separating Tobin from Davidson. With respect to the issue of international financial instability, the link between Tobin and Keynes emerges from the lecture of Chapter 12 of the General Theory, and from the analogy between the Tobin tax and the security transaction tax; on the other hands the link between Davidson and Keynes is much more related to the proposal for a new international monetary system before Bretton Woods agreements. Although the connection between Davidson and Keynes is more explicit and direct, one cannot dismiss the one between Tobin and Keynes.

More favourable is the position expressed by Dimand and Dore (2000). They examine Tobin tax, Keynes tax and Davidson proposal in a historical perspective. The authors underline that basically Tobin and Davidson, even expressing different suggestions, have been the only exceptions in the profession who have both drawn the attention to Keynes original proposals and connected them to the rich theoretical heritage on prevention of international financial crises.

In contrast, a quite negative position is revealed in De Angelis (2000) who criticizes both Tobin tax and Davidson proposal for a reform of international monetary system. At the core of the critique is the idea that both measures do not recognize the fundamental contradictory

[30] See in particular Tobin (1996) pp. 63-65.

[31] Alves A. J. jr, Ferrari F. jr. and De Paula L. F. R., The Post Keynesian critique of conventional currency crisis models and Davidson's proposal to reform the international monetary system, Journal of Post Keynesian Economics, vol. 22 n. 2, 2000, pp. 207-225.

nature of capitalistic dynamics, and hence the impossibility to eliminate its endogenous instability[32].

These examples are useful to stress an idea relevant to this paper. On one side there are theoretical suggestions meant to solve practical problems: Tobin tax and Davidson proposal are both ways to address the same question of international financial instability. On the other side, behind a pragmatic suggestion, there is a deeper theoretical foundation, what Schumpeter (1954)[33] defined "pre-analytic vision", bringing back to methodological questions and hence leading to uncover the dialectic between schools of thought. Therefore the value of Tobin tax may be judged according to two different perspectives: a) practical effectiveness (i.e. the ability to reach the stated targets), b) methodological coherence (which implies an evaluation of the degree of connection between the suggested measure and alternative pre-analytic visions). Such perspectives have their own set of questions and possible answers, and in principle are supposed to stay separate. But this is not always the case. Davidson's criticism against Tobin tax, and the related reactions, may be used as evidence of the phenomenon. In a sense, it is an example of how the interest to the debate, may lead in contrast to use practical considerations and to undervalue some methodological aspects that both Keynes and Tobin considered with equivalent emphasis. Here we draw the attention on two arguments in particular.

a) On the cause of capitalistic instability

The main theme of Chapter 12 in the *General Theory* is the description of the mechanism leading to the formation of long-term expectations, as a key factor in the justification of the possible divergence between effective demand and supply. While explaining the role of the state of confidence upon the rate of investment, Keynes made fundamental uncertainty the core of his analysis[34]. Hence the primary cause of economic instability is fundamental uncertainty. But Chapter 12 reveals it is not the **only** cause. In fact, part of such instability is peculiar to mature capitalistic organizations where the financial side of the economy is at least as relevant as the real one, and where real side promotes efficiency while financial side grants liquidity[35]. Elements such as:

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[32] Not surprisingly, responding to the paper Davidson (2000) dismantles all De Angelis critiques to his approach, using both historical evidence and Keynes quotations.

[33] J. A. Schumpeter, History of Economic Analysis (1954), reprinted in 1994 by Routledge, London.

[34] One may find evidence of the importance Keynes attached to fundamental uncertainty even from the very beginning of the Chapter, at the first sentence of the second section, where in a footnote he underlined the difference between "very uncertain" and "very improbable" events.

[35] Davidson (1999) recalling Keynes underlines how financial markets cannot serve to increase both efficiency and liquidity.

a) the separation between ownership and management;
b) the presence of a Stock Exchange where the prices of shares are driven by dealers instead of by real fundamentals;
c) the simultaneous existence of "a large number of ignorant individuals" and competing "expert professionals, possessing judgement and knowledge beyond that of the average private investor;
d) the presence of lending institutions relating their credit to their own state of confidence or extracting signals from changes in the price of equities[36],

are all part of a sophisticated capitalistic system where instability is an endogenous unavoidable feature. On the other hands the likelihood instability has to show up changes over time and especially relates to the evolutionary stage of capitalism. Both fundamental uncertainty and the existence of articulated financial markets are responsible of instability, but the relative importance of fundamental uncertainty *per-sè* decreases passing from an early stage of capitalism to a mature one where speculative motives[37] may dominate real considerations determining the perspective yield of investment.

The passage previously quoted of the *General Theory* has to be understood according to this perspective: Keynes never implied that a transaction tax could solve the intrinsic instability of capitalistic systems given that such instability is due to fundamental uncertainty. He just suggested a way to reduce it: a tax on transactions is clearly heavier on those who make more dealings than one those who deal less (and speculators are definitely of the first type). But this observation is somehow marginal with respect to the much more relevant argument basically leading to the financial instability hypothesis.

Is such a position accepted by Tobin in any way? Focusing just on the tax proposal the answer is positive. Two passages may be quoted as clear evidence of Tobin's position. The first relates to the theme of fundamental uncertainty, the second to the possibility to attain the different targets of the tax:

> "You can't predict financial markets. If you could predict them, then the process of acting on your prediction to get money, to get profits, removes the possibility of mak-

[36] See *General Theory* at pp. 154-155.

[37] Here speculation is intended in the sense specified by Keynes at page 158 of the *General Theory*. The argument of speculation is summarized by the metaphor of the beauty contest. In other words **speculation** consists in a behaviour directed to outguess others' guesses about future perspectives of equities. Such a behaviour is opposed to what Keynes defines **enterprise** which is a personal guess about an uncertain future based upon real considerations.

ing money in them. They are matters of expectations and emotions, and they are not predictable really".[38]

"J.M. Keynes pointed out in 1936 that a transaction tax could strengthen the weight of long-range fundamentals in stock market pricing, as against speculators' guesses of the short-range behaviours of other speculators. The same applies to bond markets and to the foreign exchange markets. Recently speculators in all these financial markets have focussed on particular item of news, especially on macroeconomic events, statistics and policies. Keynes's beauty contest applies: speculators concentrate on how "the markets" will respond to the news, not on basic economic meanings and portents.
The hope that transaction taxes would diminish excess volatility depends on the likelihood that Keynes's speculators have shorter horizons and holding periods than market participants oriented to long-range fundamentals. If so, it is speculators who are the more deterred by the tax. But it is true that some stabilizing transactions might also be discouraged; […] The judgment that those benign influences are not now dominant in short runs is based on the presumption that the markets would not be so volatile if they were.
In any case the principal purpose of the proposed tax is to expand the autonomy of national monetary policies. That does not depend on the success of the tax reducing volatility. The tax would not, of course, permit national macro-economic authorities to ignore the international repercussions of their policies".[39]

b) The failure of dichotomy and the missing piece of information

The second argument deserving attention is relevant as it directly leads to the debate between different strands of Keynesian thought. Keynesian perspective supports two important ideas, partly anticipated in the previous paragraph: money is not neutral, and real and financial sides do not dichotomise. The first coming debate was the one pertaining neutrality, on the other hands (especially after the '80) the failure of dichotomy has become an issue attracting broad interest in the last years. The link between financial and real side of the economy arises because of the existence of informative problems. While New Keynesians stress the role of asymmetric information, Post Keynesians refer to the role of fundamental uncertainty: in both cases the lack of information is the reason why capitalistic system is unstable and incapable to autonomously reach and maintain full employment equilibrium.
The analysis of the relative importance of fundamental uncertainty and asymmetric information in determining destabilizing effects is an intriguing question, but it cannot be pursued in this paper. Here we simply underline that apart from the obvious connection fundamental uncertainty-Post Keynesians as opposed to asymmetric information New Keynesians, there exists a variety of positions quite articulated inside the two strands of thought. With respect to

[38] James Tobin, "Reigning in the markets", Information Access Company/Unesco (France) 1/2/1999.
[39] James Tobin, "A currency transactions tax, why and how", Open Economies Review n. 7, 1996, p. 66.

the issue at task, as an example, Palley (1999) poses the question of the Tobin tax inside a wider consideration of the problems of international finance. It especially stresses the role of Minsky's contribution in the explanation of international financial crises, and it endorses Post Keynesian position according to which such crises are related to fundamental uncertainty and not to a lack of objective information. On the other hands it does not support proposal such as Davidson's, expressing favour towards measures like Tobin tax. In another contribution Palley (2000) analyses the role asset-based reserve requirements (ABRR) as instrument to stabilize international finance, without asking for more radical changes in the international monetary system.

It may be the case that Tobin lifetime research, has not been devoted to explicitly stress the role of fundamental uncertainty; at the opposite his developments regarding financial markets are related to the concept of risk (which is measurable uncertainty). This very fact maybe the reason why Post Keynesian economists are suspicious towards measures like Tobin taxes: the lack of consideration of the role of fundamental uncertainty may appear as the implicit endorsement of an objectivistic vision of the functioning of the capitalistic system. In this sense one can suppose that Tobin view is closer to New Keynesian vision. But the quoted passages by Tobin and some New Keynesian reference suggest that one have to be careful to state such a connection. Two examples of the kind of closeness expressed by New Keynesians are Greenwald and Stiglitz (1993), and Stiglitz (2002). There the authors almost completely dismissed the connection between New Keynesian approach and Tobin's research on financial markets. Furthermore, if there exists any New Keynesian support towards a Tobin tax, this is due to the fact it is perceived as an instrument to raise revenues for international purposes. No considerations are made with respect to the other targets which were much more relevant to Tobin. The following excerpt precisely states Stiglitz's view:

> "…One of the motivations (*for the Tobin tax*) is that we need a source of revenue to pay for global public goods. […] I think that the Tobin tax has enormous symbolic value. What it is said that in recent years financial markets have driven the real world. Financial markets have brought enormous instability. […] Now what is important about the Tobin tax is that part of the proposal is telling that the money raised from the revenue will be used for the financing of public goods. That is more than symbolic. It recognizes the fact that we need collective action on a global level. […] So the Tobin tax is doing two things at the same time: it is providing the basis for revenues to attack these very important public needs at the global level, and it is trying to address the imbalance associated with the free mobility of capital that has brought such devastation around the world".[40]

[40] Interview with Joseph Stiglitz in German television (ARD, Monitor) broadcasted on the 13th of May 2002, by Sonia Mikich. (italic added).

3.2. Target 2: Effectiveness

As underlined before, the reason why introducing a tax may be connected to the need to preserve the autonomy of national macroeconomic and monetary policies. This topic is not included in Chapter 12 of the *General Theory*, but it is clearly one of the themes Keynes had in mind while thinking about Bretton Woods agreements. Keynes idea was to design international organisms apt to control international stability. The idea of a universal money was part of this project. The international monetary system coming after Bretton Woods was not as Keynes imagined. Even though not fully articulated, the basic idea was in Keynes that there is a difference between the margin of action of economic policy authorities in a closed economy and in one open to foreign transactions. The higher is the degree of openness, the higher the interdependence among economies, and the lesser the possibility to influence the aggregate level of activity and hence employment. The choice of the exchange rate system, as well known, affects the effectiveness of economic policy: opening the economy means, at least to renounce to one of the instruments of economic policy, because the external constraint given by the need to balance the balance of payments takes away a degree of freedom to the authority. All these considerations lead Keynes to be in favour of complete free exchange of goods, but controlled flows of capitals. In this respect Keynes was more radical than Tobin. But one may read the difference of positions simply as the effect of the pragmatic consideration of the evolution international capitalism has taken in the recent years, as suggested by the following quotation:

> "Specifically, the mobility of financial capital limits viable differences among national interest rates and thus severely restricts the ability of central banks and governments to pursue monetary and fiscal policies appropriate to their internal economies. […] I still think that floating rates are an improvement on the Bretton Woods system. I do not contend that the major problems we are now experiencing will continue unless something else is done too.
> There are two ways to go. One is toward a common currency, common monetary and fiscal policy, and economic integration. The other is toward greater financial segmentation between nations or currency areas, permitting their central banks and governments greater autonomy in policies tailored to their specific economic institutions and objectives. The first direction, however appealing, is clearly not a viable option in the foreseeable future, i.e., the twentieth century. I therefore regretfully recommend the second, and my proposal is to throw some sand in the wheels of our excessively efficient international money markets".[41]

The issue of autonomy is faced in Arestis and Sawyer (1997). Although the authors, as underlined in the previous section, express a favourable evaluation of the Tobin tax as an instru-

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[41] James Tobin "A proposal for international monetary reform", Eastern Economic Journal, vol. IV n. 3-4, 1978, p. 154.

ment to raise revenues, to reduce the waste of resources in the financial sector, and to reduce the volatility, they are quite sceptical on the possibility of raising the autonomy of national policy. According to Arestis and Sawyer, whether such an effect exists, it is just indirect and generated by a change in expectations, not due to a change in the possible divergence between international (risk-adjusted) interest rate parity.

3.3. Target 3: Equity

Even though either Keynes tax and Tobin tax may fail to reach the target of stabilization, they contribute to raise revenues, and hence to lessen the budget constraint. Clearly this poses a question of distributive relevance and not an efficiency point. But in his respect too there is no question that Keynes and Tobin positions had the same background. Both economists shared a liberal position, and both considered the issue of raising revenues of secondary importance (or just a by-product) with respect to the other targets of a security transaction tax[42].

4. Conclusion

Among the positions against the Tobin tax there is the critique of its "orthodox" Keynesian nature. Such criticism suggests that the effective remedy against international financial instability is a radical change in the international system of payments, an idea Keynes had in mind since 1944. The present paper shows that such criticism is somehow overstated because:

1. The substantive features of the Tobin tax may be directly traced back to Keynes' original contribution; in the General Theory Keynes suggested a security transaction tax whose targets were absolutely similar to those of Tobin tax. Whether a security transaction tax is a useful instrument to control the intrinsic instability of capitalistic economies, is an argument that applies to both Keynes and Tobin.
2. Tobin himself first recognized that the measure he suggested was not supposed to solve the endogenous instability of modern (globalized) capitalism. Blaming Tobin because he did not suggest more radical changes in the international monetary system is a sort of historical mistake: how could he suggest a new world monetary order both being an Old Keynesian and living in the years right after the abandonment of Bretton Woods?
3. Tobin was awarded of a Nobel Prize especially because of his contribution to the analysis of portfolio choices under risk. Risk implies the existence of objectivistic

probability distributions, a concept at odds with fundamental uncertainty stressed by Keynes. Is this enough to confine Tobin among those followers who have "distorted" Keynes original contribution, preparing the way for the consolidation of the Neoclassical Synthesis? One may ask these simple questions: how would look like the theory of investment without the "q model" which emphasized the link between real and financial of capitalistic economies? How relevant in this model is the nature of probabilistic structures? One may suggest different answers. The one favoured in this paper suggests to locate Tobin among orthodox Keynesians, among those who tried to emendate Keynes original contribution both addressing theoretical questions and proposing practical measures to improve the functioning of capitalistic economies.

At the inaugural meeting of Governors of International Monetary Fund and World Bank in 1946, using an evocative metaphor Keynes said:

> "I hope that Mr Kelchner has not made any mistake and that there is no malicious fairy, no Carabosse, whom he has overlooked and forgotten to ask to the party. For if so the curses which that bad fairy will pronounce will, I feel sure, run as follows: "You two brats shall grow up politicians; your every thought and act shall have an *arrière-pensée*; everything you determine shall not be for its own sake or its own merits but because of something else". If this should happen, then the best that could befall – and that is how it might turn out – would be for the children to fall into an eternal slumber, never to waken or be heard of again in the courts and markets of Mankind".[43]

Many years later was Tobin's turn:

> "I dropped the idea of a currency transaction tax into the pool almost a quarter century ago – in my Janeway Lectures at Princeton in 1972. The tax was on my list of measures to enhance the efficacy of macroeconomic policy. In 1977, I was emboldened to devote my presidential address to the Eastern Economic Association entirely to it. It did not make much of a ripple. In fact, one may say that it sank like a rock. The community of professional economists simply ignored it. The interest that occasionally arose came from journalists and financial pundits. It was usually triggered by currency crises and died out when the crisis passed from the headlines".[44]

> "It has no chance, I fear. The decisive people on the international finance scene are against it. The most important finance ministers in the world are against the Tobin tax, including the US, whether it is Bush's man or Clinton's".[45]

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[42] The empirical evaluation of the capability of the Tobin tax in raising revenues is addressed in a number of papers. Arestis and Sawyer (1997) summarize this kind of literature showing that there is no agreement on the estimates of the potential effects of the tax.

[43] Lord Keynes's speech at inaugural meeting of Governors of Fund and Bank, Savannah, 9 march 1946. Reprinted in the Collected Writings of John Maynard Keynes, Cambridge University Press, 1980, vol. XXVI, pp. 216-217.

[44] James Tobin, Prologue of the book "The Tobin tax. Coping with financial volatility" Ul Haq et al.(eds.), Oxford University Press, 1996, pp. ix-x.

[45] James Tobin interview with Der Spiegel, Germany, 2nd September 2001.

If nothing else was enough convincing, one must at least concede that both Keynes and Tobin were quite pessimistic towards the idea of an illuminated, perfectly functioning international monetary system, and they both were quite right.

References

1. **Alves A. J. jr, Ferrari F. jr. and De Paula L. F. R.,** The Post Keynesian critique of conventional currency crisis models and Davidson's proposal to reform the international monetary system, *Journal of Post Keynesian Economics*, vol. 22 n. 2, 2000, pp. 207-225.
2. **Arestis P. and Sawyer M.,** How many cheers for the Tobin transaction tax?, *Cambridge Journal of Economics*, vol. 21, 1997, 753-68.
3. **Baker D.**, Taxing Financial Speculation: Shifting the tax burden from wages to wagers, *CEPR DP*, February 2000.
4. **Baker D.**, The feasibility of a unilateral speculation tax in the United States, *CEPR DP*, July 2000.
5. **Bellofiore R. and E. Brancaccio (eds.)**, Il granello di sabbia. I pro e i contro della Tobin tax, *Feltrinelli/Attac Italia*, 2002.
6. **Crotty J.**, The case for capital controls, *Political Economy Research Institute WP* July 2000.
7. **Crotty J. and Epstein G.**, In defence of capital controls
8. **Davidson P.**, Are grains of sand in the wheels of international finance sufficient to do the job when boulders are often required?, *The Economic Journal*, vol. 107 n. 442, 1997, pp. 671-86.
9. **Davidson P.**, Capital Movements, Tobin tax, and permanent fire prevention, *Journal of Post Keynesian Economics*, vol. 22 n. 2, 2000, pp. 197-206.
10. **Davidson P.**, Efficiency and fragile speculative financial markets: against the Tobin tax and for a credible market maker, *American Journal of Economics and Sociology*, v. 57 n. 4, October 1998, pp. 639-62.
11. **Davidson P.**, The role of Financial markets: efficiency versus liquidity and the financial instability hypothesis, Conference Proceedings of the 9th Annual Hyman P. Minsky Conference on Financial Structure, *Levy Institute*, April 21-23, 1999.
12. **De Angelis M.**, Capital movements, Tobin tax, and permanent fire prevention: a critical note, *Journal of Post Keynesian Economics*, vol. 22 n. 2, 2000, pp. 187-95.
13. **Dimand R. W., Dore M. H. I.**, Keynes's casino capitalism, bagehot's international currency, and the Tobin tax: historical notes on preventing currency fires, *Journal of Post Keynesian Economics*, vol. 22 n. 4, 2000, pp. 515-28.
14. **Eichengreen B., Tobin J. and Wyplosz C.**, Two cases for sand in the weels of international finance, *Economic Journal*, vol. 105, 1995, pp. 162-172.
15. **Garber P. and Taylor M. P.,** Sand in the wheels of foreign exchange markets: a sceptical note, *Economic Journal*, vol. 105, 1995, pp. 173-180.
16. **Grabel Ilene**, Capital account controls and related measures to avert financial crises, May 2002.
17. **Greenwald B. and Stiglitz J.**, New and Old Keynesians, *Journal of Economic Perspectives*, vol. 7 n. 1, Winter 1993, pp. 23-44.
18. **Jeanne O.**, Would a Tobin tax have saved the EMS?, *Scandinavian Journal of Economics*, vol. 98 n. 4, 1996, pp. 503-520.

19. **Jegourel Y. and Teiletche J.,** Volatility and liquidity on FX markets: a microstrucural approach of the Tobin tax, *Economies et Sociétés*, vol. 33 n. 9-10, pp. 375-95.
20. **Keynes J. M.**, The General Theory of Employment, Interest, and Money, 1936, reprinted by HBJ Book, Harcourt Brace Jovanovich, Publishers copyright 1953.
21. **Keynes J. M.,** Collected writings, vol. XXV and XXVI, Cambridge University Press, 1980.
22. **Michalos A. C.**, The Tobin tax: a good idea whose time has not passed, *Policy Options*, October 1999, pp. 64-67.
23. **Michalos A. C.**, Un'imposta giusta: la Tobin tax, *Edizioni Gruppo Abele*, 1999 (original title "Good taxes: the case for taxing foreign currency exchange and other financial transactions", Duncan Press, 1997).
24. **Ormerod P.**, What Economics can tell us about the Tobin tax, *LTSN Economics*, 2001.
25. **Palley T.**, Destabilizing Speculation and the Case for an International Currency Transaction Tax, *Challenge* v. 44 n. 3 May-June 2001, pp. 70-89.
26. **Palley T.**, International Finance and problems of capital account governance, Conference Proceedings of the 9th Annual Hyman P. Minsky Conference on Financial Structure, *Levy Institute*, April 21-23, 1999.
27. **Palley T.**, There is analternative, Financial Markets Center, *FOMC Alert* Nov./Dec. 1997.
28. **Patomaaki Heikki,** Economics of Financial Instability: Realism and Emancipation in the idea of the Tobin tax, *Ekonomiska Samfundets Tidskvift*, vol.n 53 n.1, 2000, pp. 27-42.
29. **Patomaaki Heikki**, Making a workable Tobin tax: don't believe in the economic orthodoxy!, *Network Institute for Global Democratization*, 2002.
30. **Pollin R.**, Securities transactions tax for US financial markets, Conference Proceedings of the 9th Annual Hyman P. Minsky Conference on Financial Structure, *Levy Institute*, April 21-23, 1999.
31. **Pollin R., D. Baker and M. Schaberg**, Securities Transaction Taxes for U.S. Financial Markets, *Political Economy Research Institute* WP n. 20 July 2001.
32. **Schmid Frank A.**, The Tobin tax, International Economic Trends, *Federal Reserve Bank of St. Louis*, November 2001.
33. **Stiglitz J.**, Responding to economic crises: policy alternatives for equitable recovery and Development, The World Bank, Washington DC 1-17, 29/9/1998
34. **Stiglitz J.**, Globalization and its discontents, WW Norton and Company, 2002.
35. **Tobin J.**, A Currency Transaction Tax, Why and How, *Open Economies Review*, n. 7, 1996, pp. 63-69.
36. **Tobin J.**, A Proposal for International Monetary Reform, *Eastern Economic Journal*, vol. IV, n. 3-4 July-October 1978, pp. 153-159.
37. **Tobin J.**, Interview with James Tobin: Reigning in the markets, *Information Access Company*, UNESCO (France), February 1, 1999.
38. **Tobin J.**, Price Flexibility and Output Stability: An Old Keynesian View, *Journal of Economic Perspectives*, vol. 7 n. 1, Winter 1993, pp. 45-65.
39. **Ul Haq M., Kaul I., Grunberg (eds.)**, The Tobin tax. Coping with financial volatility, *Oxford University Press*, 1996.