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Impact Factors of Global Tax Revenue - Theory of Cycle of Money

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Abstract

This paper analyzes the way that impact factors of global tax revenue affect the transfer pricing and the tax authorities. Therefore, are examined the impact factors which are the bureaucracy, the liability, the intangibles, the risks, the capital, and the costs, of the tax system. The capital and the liability are proportional to global tax income. The charged intangibles, the costs, the risks, and the bureaucracy, are inverted and proportional to the global tax income. Thereupon, this paper extracted conclusions about the global tax revenue and its connection with the prior parameters which affect it.

Keywords: *Global Tax Revenue; The Cycle of Money*

Introduction

The quantification analysis of each impact factor of the tax system with the tax revenue from a global view is done by the application of the Q.E. method (Challoumis, 2019b, 2019a, 2020b, 2022b). The Q.E. method is applied to each impact factor in two conditions. The first condition is when there are used all the impact factors of the equation, and the second condition is when we have the absence of the impact factor which is under study. On that ground of this method is determined the behavior analysis of mathematical equations. In that way are examined the impact factor of capital, liability, risks, costs, bureaucracy, and the intangibles are. The analysis of the behavior of the model stands on the scrutiny of the structural characteristics of each model accordingly allowing with that way the extraction of general conclusions about the model which is under examination. The frequency analysis behavior scrutinizes the behavior of the dependent variables, but from the view of the number of appearances of a variable than another, estimating the impact that one independent variable has with one or more other independent variables.

Thereupon, using the previous two axes of the Q.E. method is plausible to extract conclusions about the behavior of mathematical equations, and the way that some factors react to changes. Consequently, is plausible the transformation of quality data to quantity data. This method is applied for this study for controlled transactions and more precisely in the variables of the impact factor of the tax revenue. The mechanism of Q.E. is based on the dependent variables which are modified for the generator. Thereupon, the generator produces values for the dependent variables. The extracted values of the generator permit the creation of magnitudes, which are the base for comparisons, and for the scrutiny

of mathematical equations. Thus, is plausible to quantify qualitative data. In our analysis, this method is used for clarification of the behavior of the impact factor of the global tax revenue.

Impact Factor of Tax Revenues

The impact factor of tax revenues of countries which are tax heaves, s according to the "Methods of controlled transactions and identifications of tax avoidance" is determined as that:

$$s = \frac{k+l}{r+c+t+i} \quad (1)$$

Therefore countries receive the products that are taxed in different countries. This allocation of profits between profits and losses permits the enterprises which participate in controlled transactions of the transfer pricing activities to maximize their utility (Challoumis, 2018e, 2018d, 2018c, 2019g, 2019f, 2019e, 2019c, 2020c, 2023k). But contemporaneously the tax revenue from a global view is declined. Then, the loss of tax income from some countries is more than the profits that make the countries which are tax havens. Thereupon, the symbol of s the impact factor of tax revenue from a global view, and there are some coefficients which are $k, l, r, t,$ i and c. Thus, the symbol of k is about the impact factor of capital, l is the impact factor about the liability of the authorities on the tax system. The interpretation of the liability is about how unbalanced it is the tax system. The parameter of r is about the risk, the t is about how trustworthy is the tax system (bureaucracy). The symbol of i examines the case of intangibles (the intangibles charged to the subsidiaries) of the tax system. Additionally, the symbol of c is about the cost of enterprises (AICPA, 2017; Baker et al., 2020; Dancygier & Laitin, 2014; de A. Dantas et al., 2018; de Queiroz & Capelari, 2020; Hartz & John, 2009; Leckel et al., 2020; Marenco et al., 2017; Montenegro Martínez et al., 2020; Nowlin et al., 2020; Porter, 2007; Zayats O.I., 2019).

The symbols with the "~" are accordingly the same thing but from the view of uncontrolled transactions. Thus, the numerator is proportional to the income of taxes, as the investments and the stable tax environments, with liability enhance the tax income.

On the other hand, the denominator is inverted and proportional to the tax income, as the risk, the cost, and the unbalance of taxation cause less tax income. Moreover, for $\tilde{s}$ we have that:

$$\tilde{s} = \frac{\tilde{k}+\tilde{l}}{\tilde{r}+\tilde{c}+\tilde{t}+\tilde{i}} \quad (2)$$

Since eq. (3) is determined as the aggregate impact factor of tax revenues, which is symbolized by $\hat{s}$, and is defined by the next equation:

$$\hat{s} = s + \tilde{s} \quad (3)$$

Based on the prior equations we could proceed to the identification of the behavior of the impact factors of tax revenues in the case of tax heavens, and in the case of the non-tax heavens.

Consequently, using the prior equations is plausible to examine the controlled and the uncontrolled transactions. Then, s is a factor that allows the comparison between the controlled the uncontrolled transactions. Thence can have a standalone behavior analysis of controlled transactions and a combined behavior analysis between the controlled transactions with the uncontrolled transactions. The next section analyzed the impact factor of tax revenues with the rest impact factors.

Determination of Impact Factors of the Tax System

The determination of each impact factor of the tax system is established by the impact factor of global tax revenue. To clarify the way that each impact factor affects global tax revenues. In the first application of Q.E. methodology are applied all the factors of the global tax revenue, s. In that case, is plausible to obtain the behavior of the global tax revenue using the completed form of the eq. (1).

In the second application of the Q.E. methodology are applied all the factors are except the factor which is under review (Abate et al., 2020; Castro & Scartascini, 2019; Cruz-Castro & Sanz-Menéndez, 2016; de Mello-Théry et al., 2020; Mancuso & Moreira, 2013; McIsaac & Riley, 2020; OECD, 2020b; Rizzo & Throsby, 2006; Suslov & Basareva, 2020; Swanstrom et al., 2002; Wright et al., 2017). Thereupon, in that case, is avoided the factor of bureaucracy, $t$of tax system, s.

In the third application of Q.E. methodology are applied all the factors except the impact factor of liability, l. In the fourth application of Q.E. methodology are applied all the factors except the impact factor of intangibles, t. In the fifth application of the Q.E. methodology is applied all the factors except the impact factor of risks, r. In the sixth application of the Q.E. methodology is applied all the factors except the impact factor of capital, k. In the seventh application of Q.E. methodology is applied all the factors except the impact factor of costs, c.

Then it is obvious that we proceed to an analysis of two comparisons. Therefore, we compare each impact factor in two possible conditions (Aakre & Rübbelke, 2010; Cruce & Quinn, 2019; Evans et al., 1999; Fronzaglia et al., 2019; Herrington, 2015; Mohindra, 2007; Nowicki, 2019; Peres et al., 2020; Persson & Tinghög, 2020; Ruiz et al., 2017; Turner, 2010). The first condition is the case in that we have all the factors of the eq. (1). In the second case, we have all the factors except the factor that we study. Then, we have six impactors, and consequently, we proceed with twelve comparisons.

Then, it is applied the Q.E. method uses behavioral analysis and frequency analysis behavior (Acs & Szerb, 2007; Driver, 2017; Howlett, 2020; Jia et al., 2020; Le Bodo et al., 2019; Maestre-Andrés et al., 2019; Wilson & Gowdy, 2013). The behavior analysis of impact factors permits the determination of the relation between the global tax revenue with the rest of the impact factors. This methodology is illustrated below:

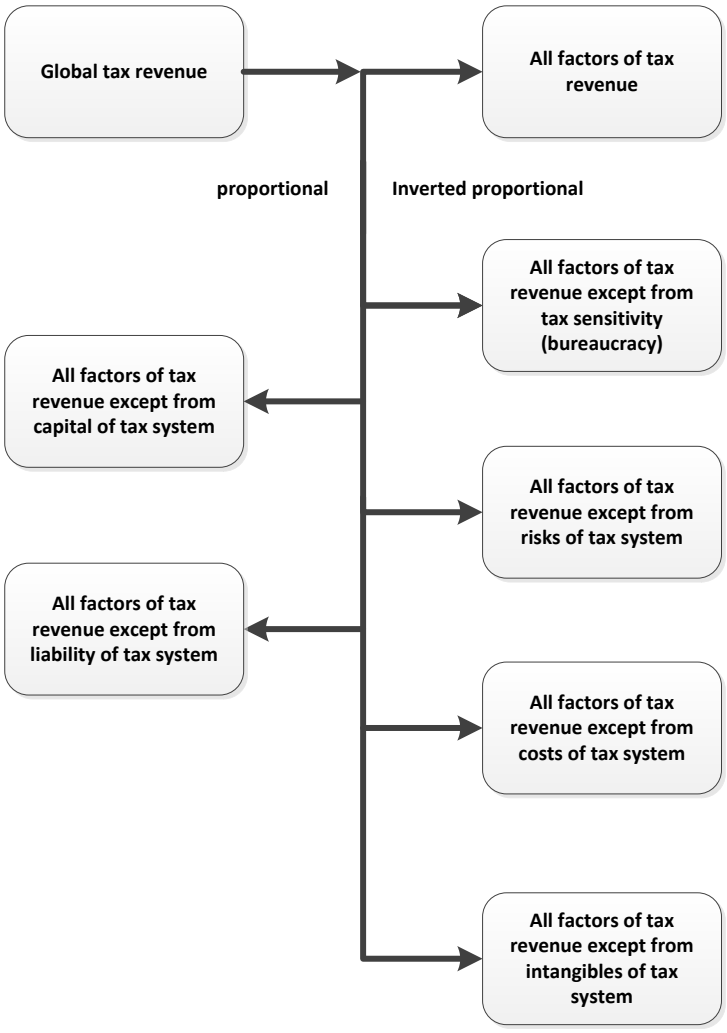

Figure 1: Steps of Q.E. application

The previous scheme is shown the methodology followed by the Q.E. method to determine the behavior of the global tax revenue in the case that there exists the bureaucracy, the liability, the intangibles, the risks, the capital, and the costs in the controlled transactions of the transfer pricing and the case that we have an absence of each the impact factor.

Impact Factors on the Revenues of the tax System

The impact factors of the tax system are in interaction with the impact factor of global tax revenues. In this behavioral analysis is determined the model which explains the behavior of the impact factor of tax revenues with the existence and with the avoidance of each impact factor. All the necessary equations have been referred to in the previous sections, except for one condition. Then, for the application of the Q.E. method we use the following condition, which is:

$$t > l > i > r > k > c \tag{4}$$

Therefore, is plausible to proceed to a quantitative analysis using eq. (1), (2), (3), and (4). The examination of tangibles with each impact factor is critical for the transfer pricing theory. The examination of capital is used many times by enterprises of controlled transactions to reach the arm's

length principle. Thence, applying the Q.E. method and choosing the appropriate values for the coefficients of global tax revenue:

Table: Compiling coefficients

Factors	Values of s	Values of s'	Values of s'	Values of s'	Values of s'	Values of s'	Values of s'
k	0,4	-	0,4	0,4	0,4	0,4	0,4
i	0.6	0.6	-	0.6	0.6	0.6	0.6
l	0.7	0.7	0.7	-	0.7	0.7	0.7
r	0.5	0.5	0.5	0.5	-	0.5	0.5
c	0.3	0.3	0.3	0.3	0.3	-	0.3
t	0.8	0.8	0.8	0.8	0.8	0.8	-
fs	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
fs_i	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3

Thereupon, using the previous factors can determine the behavior of the model through the generator of the Q.E. method. The factors of the prior table have an upper limit, 1, and a lower limit, 0. But s and $\tilde{s}$ are plausible to receive values greater than one as their mathematical structure allows this. After 461 iterations received the diagrams of the next sections.

Impact Factor of Capital

It applied the Q.E, method to the data of the prior table which is determined in the previous section. Thereupon, in the following section, come up the results of the Q.E. generator to the case of the impact factor of capital:

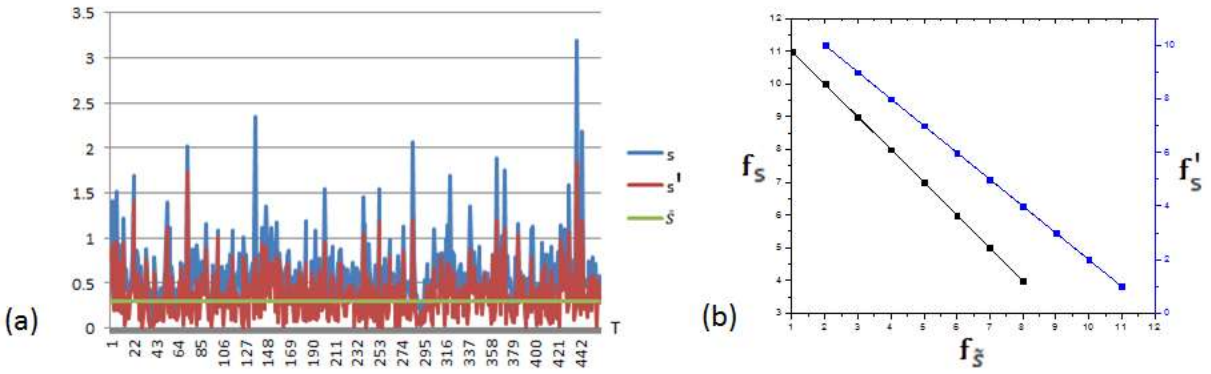

Figure 2: (a) Impact factors of s (series 1) and s' (series 2), (b) frequencies of s and s'

In the prior figure, is used the $\tilde{s}$, which here is the same for the case where the capital is there and in the case that avoided the capital is. Then s (blue line) is symbolized the case that the impact factor of k which symbolizes the capital which has the enterprises in the environment of the tax system. With s' (red line) it symbolized the case that avoided the capital, k. The global tax revenue is higher in the case that has the capital (blue line) than in the case where the impact factor of capital is avoided (red line) (Challoumis, 2018a, 2018b, 2019a, 2019f, 2019e, 2019g, 2019d, 2020a, 2020c, 2021b). As expected the absence of capital declines global tax revenues.

The reason for the diminished global tax revenues in the case of s' is that the capital makes the companies of controlled transactions enforce and extend their activities. Should be notified that for the comparative analysis, it is used $\tilde{s}$ as constant to be able to compare s with s'. Additionally, from the Fig. 2 (b), it is obtained that the frequency of the f_s (black line) is lower than the frequency of f_s' (blue line) (Altman, 2012; Andriansyah et al., 2019; Brakke, 2023; Buonomo et al., 2020; Camous & Gimber, 2018; Carattini et al., 2018; Challoumis, 2020b; Cruz-Castro & Sanz-Menéndez, 2016; Delgado Rodríguez & de Lucas Santos, 2018; Dollery & Worthington, 1996; Erickson, 2016; Forson, 2020; Gocekli & Comertler, 2021; Haigh, 2020; Kreft & Sobel, 2005; Ladvocat & Lucas, 2019; Scholvin & Malamud, 2020; Siegmeier et al., 2018). Thereupon, the companies which participate in controlled transactions of transfer pricing decreased than in the case that there is not any capital [blue line of Fig. 2 (b)]. The interpretation of this economic situation is that the requirements for capital make the companies of controlled transactions stop their activities (Bestari et al., 2019; Deng & Li, 2011; Gocekli & Comertler, 2021; Grove et al., 2020; Lal et al., 2018; Limberg, 2020; Strassheim, 2019; van den Bergh, 2022). But, at the same time, the global tax revenue increases when the capital is increased. Companies with controlled transactions prefer to have profits without growing their capital. Then, the number of controlled transactions is less when there are requirements for capital because the existence of capital increases global tax revenue (Challoumis, 2018c, 2018d, 2019d, 2020a, 2021c, 2023f, 2023c, 2023d, 2023e, 2023l, 2023h, 2023i, 2023g). Then it is concluded that the increased requirements for capital for the scope of transfer pricing make the companies prefer uncontrolled transactions, instead of controlled transactions.

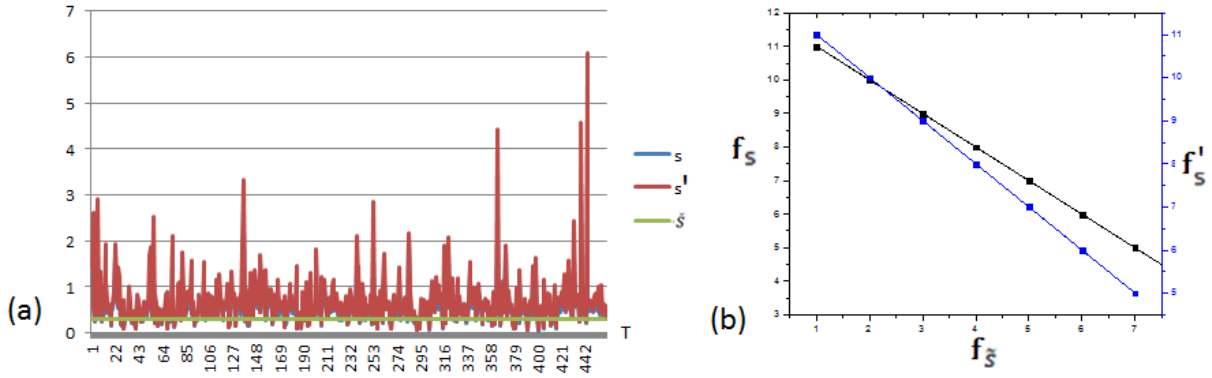

Figure 3: (a) Impact factors of s (series 1) and s' (series 2), (b) frequencies of s and s'

In the prior figure, it is used the $\tilde{s}$, which here is the same for the case of the costs and in the case that there are avoided costs. Then s (blue line) symbolized the case that the impact factor of c which symbolizes the costs which have the enterprises in the environment of the tax system. With s' (red line) it symbolized the case that avoided the costs, c. The global tax revenue is higher in the case that there are no costs (red line) than in the case that the impact factor of costs exists (blue line). As is expected the absence of costs increases global tax revenues. The reason for the diminished global tax revenues in the case of s is that the costs make the companies of controlled transactions reduce their activities (Challoumis, 2019e; Cruce & Quinn, 2019; Haskel & Westlake, 2021; Kanthak & Spies, 2018; Liu et al., 2018; Nash et al., 2017; OECD, 2020a; Shepherd & Wiklund, 2020; Silveira Porto & Viriato Memória, 2019; Soboleva I.V., 2019; Xu et al., 2018). Should be mentioned that for the comparative analysis, it is used $\tilde{s}$ as constant to be able to compare s with s'. Additionally, from the Fig. 3 (b), it is obtained that the frequency of the f_s (black line) is higher than the frequency of f_s' (blue line). Therefrom, the enterprises which participate in controlled transactions of transfer pricing with costs are more than in the case where there are no costs [blue line of Fig. 3 (b)]. The interpretation of this economic situation is that the costs make the enterprises increase their business activities. Costs are not considered tax obligations, but the

investments of companies for the enforcement of their commercial activities. Then, the costs increase the spending of the companies, but this comes back as feedback to the profits of the companies. This means companies that don't spend will not have to extend profits. Also, at the same time, the global tax revenue increases when the capital is increased. The increasing costs for the scopes of the business activities of companies help them to grow. Simultaneously the low costs increase the global tax revenue. This situation shows that the tax authorities should try to reduce the costs for the companies, and at the same time, the companies should try to enlarge their activities through more spending which will come back from the market profits.

Impact Factor of Intangibles

It applied the Q.E. technique, method to the data of the prior table which is determined in the previous section. Thereupon, in the following section, presented the results of the Q.E. generator in the case of the impact factor of intangibles:

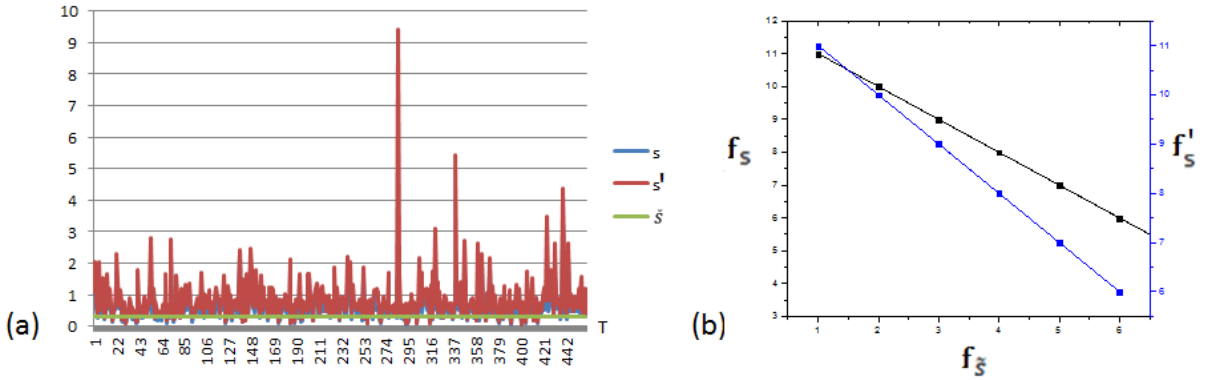

Figure 4: (a) Impact factors of s (series 1) and s' (series 2), (b) frequencies of s and s'

In the prior figure, it is used the $\tilde{s}$, which here is common for the tangibles and the intangibles. Then s (blue line) is symbolized the case that the impact factor of i which symbolizes the intangibles of the tax system. With s' (red line) it symbolized the case that avoided the impact factor of intangibles of the tax system, i. In this case of s there is a tax system where the controlled transactions of transfer pricing have the tangibles and the intangibles (but caution, the charged intangibles). Moreover, with s' is a tax system, only with tangibles (and without intangibles which are charged). The global tax revenue is higher in the case that the tangibles and the charged intangibles (blue line) than in the case of the impact factor of intangibles that are not used (red line). As is expected the existence of charged intangibles to subsidiaries from the mother companies causes less global tax income. The reason is that independently from the fact that intangibles cost to the companies, they use it to have a better allocation of their profits and losses. Additionally, from Fig. 4 (b), it is obtained that the frequency of the f_s (black line) is higher than the frequency of $f_s{}'$ (blue line). Therefrom, the companies which participate in controlled transactions of transfer pricing increased than in the case that there are only tangibles (blue line). Then, the number of uncontrolled transactions declined when there are tangibles and intangibles because companies with controlled transactions have fewer tools for the allocation of profits and losses. Then, when there are tangibles and intangibles the global tax revenue is less Thus, it is obtained that the strict tax systems for controlled transactions, and simultaneously the low tax environments help the uncontrolled transactions and increase the global tax revenue.

Impact Factor of Liability

It applied the Q.E. technique and method to the data of the prior table which is determined in the previous section. Thereupon, the following section showed the results of the Q.E. generator in the case of the impact factor of liability:

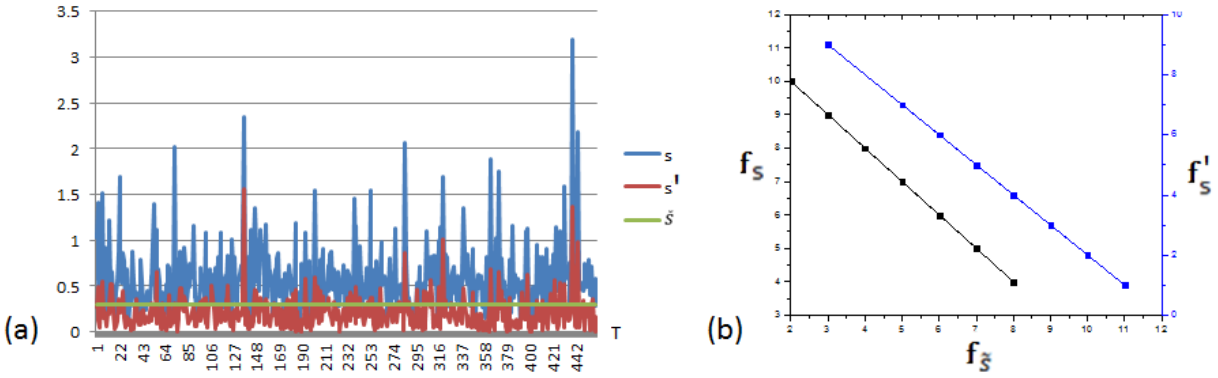

Figure 5: (a) Impact factors of s (series 1) and s' (series 2), (b) frequencies of s and s'

In the previous figure is used the $\tilde{s}$, which here is common for the tangibles and the intangibles. Then s (blue line) is symbolized the case that the impact factor of l which symbolizes the liability of the tax system (existence of a constant tax system) (Challoumis, 2018b, 2020c, 2023g, 2023c, 2021e, 2022b, 2022a, 2023a, 2023j, 2023l, 2023b, 2023h). With s' (red line) it symbolized the case that the absence of the impact factor of liability of the tax system, l. In the case of s there is a constant and reliable system, and with s' is an unstable tax system, with a low liability. In consequence, the global tax revenue is higher in the case that the impact factor of the liability (blue line) than in the case the impact factor of liability is not used (red line). It is concluded as expected that the existence of a tax system that has not had many disturbances serves better the tax revenue from the global view. Additionally, from the Fig. 5 (b), it is obtained that the frequency of the f_s (black line) is lower than the frequency of $f_s{}'$ (blue line). Thereupon, the companies which participate in controlled transactions of transfer pricing increased in the case where the liability of the tax system is low (blue line). Then, the number of uncontrolled transactions declines when in an unreliable system, meaning the existence of tax systems with a lot of disturbances and changes to their tax policy. Accordingly, when there exists a tax system that the companies can trust, then the number of controlled transactions is decreased, and the number of uncontrolled transactions is increased. Thus, it is obtained that reliable tax systems increase uncontrolled transactions and global tax revenue.

Impact Factor of Risks

It is applied the Q.E. technique to the data of the prior table which is determined in the previous section. Thereupon, in the following section, come up the results of the Q.E. generator in the case of the impact factor of risks:

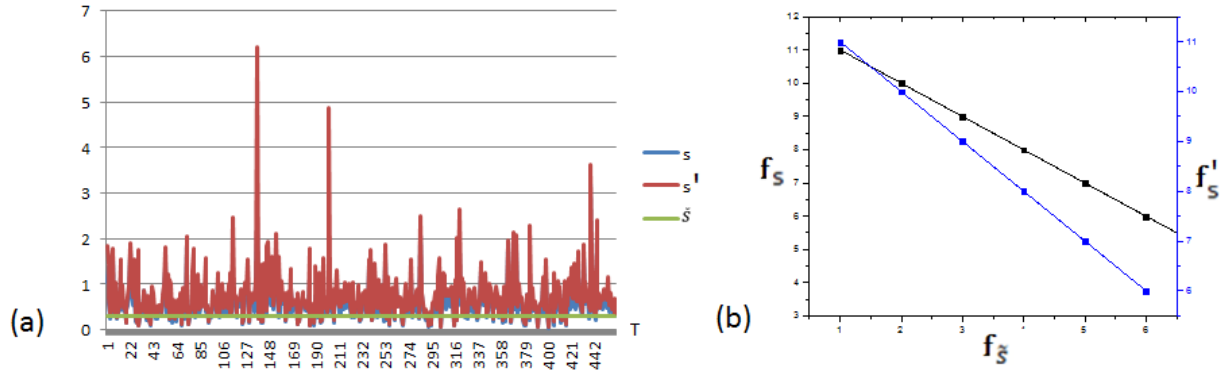

Figure 6: (a) Impact factors of s (series 1) and s' (series 2), (b) frequencies of s and s'

In the prior figure, it is used the $\tilde{s}$, which here is common in the case that the risks and in the case that there avoided the risks. Then s (blue line) is symbolized the case that the impact factor of r which symbolizes the risks of the tax system. With s' (red line) it symbolized the case that avoided the risks of the tax system, r. The global tax revenue is higher in the case that does not have the risks (red line) than in the case where the impact factor of risk is used (blue line). As is expected the existence of risks declines global tax revenues. The reason for the diminished global tax revenues in the case of s is that the risks make the companies of controlled transactions stop their activities. Should be notified that for the comparative analysis, it is used the $\tilde{s}$ as constant to be able to compare the s with the s'. Additionally, from Fig. 6 (b), it is obtained that the frequency of the f_s (black line) is higher than the frequency of $f_s{}'$ (blue line). Thereupon, the companies which participate in controlled transactions of transfer pricing increased than in the case that there are no risks [blue line of Fig. 6 (b)]. Then, the number of controlled transactions is less when there are no risks because the absence of risks increases the global tax income, and the companies of controlled transactions are declined, and they are substituted from companies that participate in the uncontrolled transactions Then it is concluded that the increased risks of transfer pricing make the companies prefer the uncontrolled transactions, instead of controlled transactions.

Impact Factor of Costs

It applied the Q.E. method to the data of the prior table which is determined in the previous section. Thereupon, in the following section, there are the results of the Q.E. generator in the case of the impact factor of costs:

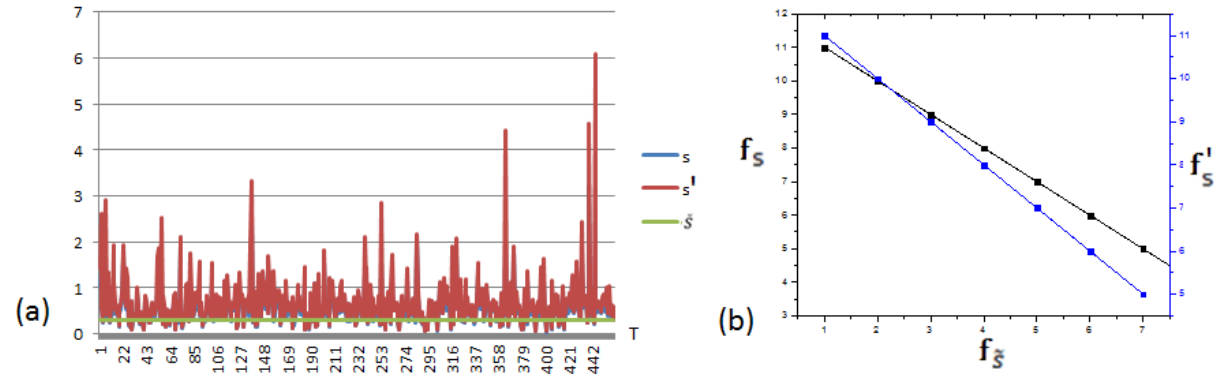

Figure 7: (a) Impact factors of s (series 1) and s' (series 2), (b) frequencies of s and s'

In the prior figure, it is used the $\tilde{s}$, which here is the same for the case of the costs and in the case that there are avoided costs. Then s (blue line) symbolized the case that the impact factor of c which symbolizes the costs which have the enterprises in the environment of the tax system. With s' (red line) it symbolized the case that has avoided the costs, c. The global tax revenue is higher in the case that there are no costs (red line) than in the case that the impact factor of costs exists (blue line). As is expected the absence of costs increases global tax revenues. The reason for the diminished global tax revenues in the case of s is that the costs make the companies of controlled transactions reduce their activities. Should be mentioned that for the comparative analysis, it is used $\tilde{s}$ as constant to be able to compare s with s'. Additionally, from the Fig. 7 (b), it is concluded that the frequency of the f_s (black line) is higher than the frequency of $f_s{}'$ (blue line). Therefrom, the enterprises which participate in controlled transactions of transfer pricing with costs are more than in the case where there are no costs [blue line of Fig. 7 (b)]. The interpretation of this economic situation is that the costs make the enterprises increase their business activities. Costs are not considered tax obligations, but the investments of companies for the enforcement of their commercial activities (Challoumis, 2018d, 2019d, 2019e, 2019g, 2020c, 2021b, 2021e, 2022a). Then, the costs increase the spending of the companies, but this comes back as feedback to the profits of the companies. This means companies that don't spend will not have to extend profits. Also, at the same time, the global tax revenue increases when the capital is increased. The increasing costs for the scopes of the business activities of companies help them to grow. Simultaneously the low costs increase the global tax revenue.

Impact Factor of Bureaucracy

It applied the Q.E. method to the data of the prior table which is determined in the previous section. Thereupon, in the following section, come up the results of the Q.E. generator to the case of the impact factor of bureaucracy:

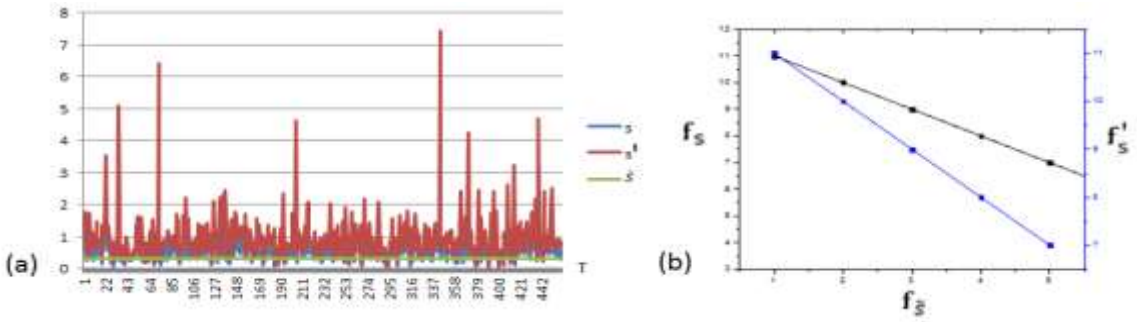

Figure 8: (a) Impact factors of s (series 1) and s' (series 2), (b) frequencies of s and s'

In the previous scheme, as used the $\tilde{s}$, which here is common for the tangibles and the intangibles. Then s (blue line) is symbolized the case that the impact factor of t which symbolizes the sensitivity of the tax system (existence of increased bureaucracy). With s' (red line) is symbolized the case that the absence of the impact factor of sensitivity of the tax system, t. Then in the case of s we have an unstable tax system, and with s' have a stable tax system, with a high bureaucracy. Then, when there exists a tax system that is characterized by increased bureaucracy (blue line) the tax revenue is decreased. In the case that there have avoided the impact factor of tax sensitivity (bureaucracy) the tax revenue from a global view is increased rapidly. Moreover, in Fig. 8 (b), it is obtained that the frequency of the f_s (black line), where used the impact factor of t, more companies participate in controlled transactions, than in the case of $f_s{}'$ (blue line) where the tax system has a lack of bureaucracy.

Conclusions

This paper gives us results about the behavior of global tax revenue by a series of impact factors. Then, come up with the following conclusions about the global tax revenue. The bureaucracy reduces the global tax revenue in the case that this impact factor is avoided. The number of controlled transactions is reduced in the case that there is no bureaucracy. The liability of the tax system increases the global tax system. This means that the tax system which has not a lot of disturbances and changes in their law offers better conditions for the incensement of global tax revenue. Companies that don't participate in controlled transactions are increased in the case that there exists a liable tax system.

The charged intangibles of the tax system decrease global tax revenue. This shows that as more tools have the companies which participate in controlled transactions for allocation of their profits and losses, then more is the decrease of global tax revenue. When there are intangibles the companies of controlled transactions increase because they use them for better allocation of their profits and losses. The absence of risks of enterprises in the tax system causes an increase in global tax revenue . Moreover, the number of companies that participate in controlled transactions is increased in case that is no risks. The reason is that the risks relate to the existence of the companies or in other words their willingness to participate in controlled transactions activities. The safer the tax system, the more will be the income from taxes in a global view. The capital invested in the companies increases the global tax revenue. But, for the companies, many times the requirements for enlarging their capital at the same time make them more hesitant and reduce their business activities. The absence of costs in the tax system increases global tax revenue.

Thereupon, the enterprises which participate in controlled transactions of transfer pricing with costs are more than in the case where there are no costs. The interpretation is that the costs make the enterprises increase their business activities (Challoumis, 2018b, 2018a, 2019b, 2019g, 2020a, 2021a, 2021d, 2022b). As a more commercially active company, this means that increases its spending. From the previous points, it is determined the general behavior of the global tax revenue with a series of impact factors. It has concluded that the more helpful the rules and the economic environment for uncontrolled transactions the more the global tax revenue. Finally, this situation is enhanced in the case that exists more restricted conditions for the controlled transactions of transfer pricing.

Appendix

The applied code for the results:

```
%2017 (c)(r) Constantinos Challoumis Q.E. method for Transfer Pricing
 q=0;
while q<10
q=q+1;
count=0;
counts=1;
counts1=1;
counts12=1;
counts13=1;
counts21=1;
counts23=1;
counts31=1;
counts33=1;
counts41=1;
counts43=1;
```

```
counts51=1;
counts53=1;
counts61=1;
counts63=1;
while count<10
if rand()<9
   t=0.8*rand();
end
if rand()<9
   l=0.7*rand();
end
if rand()<9
   i=0.6*rand();
end
if rand()<9
   r=0.5*rand();
end
if rand()<9
   k=0.4*rand();
end
if rand()<9
   c=0.3*rand();
end

s=(k+l)/(r+c+t+i);
s1=(k+l)/(r+c+i);
s2=(k)/(r+c+t+i);
s3=(k+l)/(r+c+t);
s4=(k+l)/(c+t+i);
s5=(l)/(r+c+t+i);
s6=(k+l)/(r+t+i);

s_tilda=0.3;
   count=count+1
   if s<0.3 %it is one limit for comparison above than this we think s_tilda, but is not the same one as
s_tilda
         %and it is used as meter to compare all the different counts1,counts2,....
         %it could take any other value, it is just a constant
      counts=counts+1;
   else
      counts1=counts1+1;
   end

   if s1<0.3
      counts12=counts12+1;
   else
      counts13=counts13+1;
   end

   if s2<0.3
      counts21=counts21+1;
```

```
   else
      counts23=counts23+1;
   end

    if s3<0.3
      counts31=counts31+1;
   else
      counts33=counts33+1;
    end

   if s4<0.3
      counts41=counts41+1;
   else
      counts43=counts43+1;
   end

   if s5<0.3
      counts51=counts51+1;
   else
      counts53=counts53+1;
   end

   if s6<0.3
      counts61=counts61+1;
   else
      counts63=counts63+1;
   end

end
tec=[count,counts,counts1,counts12,counts13,counts21,counts23,counts31,counts33,counts41,counts43,c
ounts51,counts53,counts61,counts63,t,l,i,r,k,c,s,s1,s2,s3,s4,s5,s6,s_tilda;tec];
end
```

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