RISKS INDUCED BY THE TREND AND LEVEL OF FOREIGN DEBT IN ROMANIA

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Abstract

The article[1] presents some risks of external debt in Romania generated by its structure and characteristics. Given the rise in the share of short-term external debt, the associated risks increase, among which there is the augmentation in the volatility of the exchange rate of the national currency, the advance in the probability of a currency crisis and the vulnerability to interest rate fluctuations. The author calculates specific indicators from the economic literature in order to attain the paper's objectives, namely, to see what the situation of Romania's indebtedness is and if there is a vulnerability to an external debt crisis. In addition, other indicators are used to assess the debt characteristics of an economy. The values of the calculated indicators show that two shocks have been felt during the analysed period; the first is the economic-financial crisis triggered in 2008, and the other is the COVID-19 pandemic. The results show that Romania is vulnerable to the outburst of a foreign debt crisis, with a risk of having problems regarding debt repayment. The methodology used joins the empirical analysis of statistical data and their interpretation, with the identification of correlations.

Keywords: hazard, external indebtedness, vulnerability, crisis

JEL Classification: F31; F32; F34; G01

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1. Introduction

Foreign debt allows the augmenting of internal savings, giving the debtor country the opportunity to finance a volume of investments larger than would be possible based only on internal resources.

External financing offers access to many debt instruments, which, theoretically, allows better management of the risk and cost of external borrowing. Thus, it can be, in some conditions, cheaper than internal financing.

The risks regarding the indebtedness of a country refer to ensuring the sustainability of the debt and depend mainly on the specific risks of each country but also on the perception of the market on the debtor state.

The paper aims to analyse the situation of Romania's indebtedness, in order to see if there is a risk of an external debt crisis. To this purpose, the paper is structured in three parts. First, the author presents some theoretical aspects of the risks generated by indebtedness, mainly about the types of risks and debt sustainability. The second part of the paper analyses the evolution of the share of short-term external debt and medium and long-term external debt in the total external debt, in Romania. Then, the indicators referred to by Reinhart and Rogoff (2009) are computed in order to see what the situation of Romania's external debt is, as well as the indicators used by Manasse and Roubini (2005) in order to assess the "safety" of the country from the point of view of indebtedness. We correlate the values of these indicators with the most important factors of vulnerability of the Romanian economy (especially, the deficit of the current account and the budgetary deficit). The last part of the paper is represented by the conclusions, where the author states that in Romania, the ability to pay back the external debt is negatively influenced particularly by the external and budgetary imbalances, but also by the faster increase of the external debt compared to GDP, the risks being mainly in terms of solvency of the external debt.

The methodology used joins the empirical analysis of statistical data and their interpretation, with the identification of correlations.

The period analysed is 2008-2022 to catch and highlight the effects of the economic and financial crisis from 2008 and of the COVID-19 crisis from 2020 on the Romanian foreign debt. The data used are from the National Bank of Romania and from the Ministry of Finance.

2. About indebtedness risks

In the economic literature, there are identified *three large types of risks regarding the external indebtedness* of an economy: the risk regarding the lack of solvency; the lack of liquidity and the exchange rate risk. *Debt insolvency risk* is quantified by a ratio of external debt to GDP higher than 49.7%, together with monetary or fiscal imbalances, and high external financing needs that signal a lack of liquidity as an element of debt unsustainability. *The risk of illiquidity* is identified by moderate debt levels, but with short-term debt exceeding 130% of reserves, together with political uncertainty and inflexible international capital markets. *Currency risk* appears in the context of low economic growth and relatively fixed exchange rates. The currency risk is specific to foreign debt, and it consists of the depreciation of the national currency compared to the foreign currencies in which the debt is contracted, with effects in the increase of the debt burden. Each type of risk differs in terms of the probability of inducing a crisis (Manasse, Roubini, 2005).

All three types of risks can come under the generic name of non-payment/default risk. Non-payment of the debt refers to the impossibility of paying the due installment on the date stipulated in the contract, with effects in the sense of debt renegotiation, a process that is long and expensive in practice. Ultimately, defaulting on debt can lead to a debt crisis.

Debt default risks are also influenced by how the factors that characterise each type of risk combine, given that in an economy the elements evolve dynamically and influence each other. Thus, a heavily indebted country (with a high ratio of debt to GDP) may have a low probability of default, while another with a moderate level of indebtedness may present a considerable risk of default. This situation may be due to the cumulated existence of a high share of short-term debt, political uncertainty and a relatively fixed exchange rate that make a liquidity crisis in the latter country more likely than a solvency crisis in the former, especially if the high degree of indebtedness is associated with monetary stability, a large current account surplus and sound public finances. Therefore, the value thresholds do not represent in themselves an absolute criterion for assessing the probability of default (Milea, 2021), but several criteria for evaluating the risk of default must be correlated.

Risks affect debt sustainability. Debt sustainability is a property that assumes that the evolution of the debt ensures the payment of the debt service in the medium, and possibly long term, without the need for significant changes in economic policies, without producing shocks, tensions on the internal market, without causing major fluctuations of some macroeconomic variables of the national economy. Sustainability allows for fluctuations in debt and is important to achieve the anticipated positive effect in the medium and long term (Milea, 2019a).

According to the IMF, *debt sustainability* requires the fulfilment of three conditions: solvency, liquidity and realistic adjustments (the level and evolutions forecasted of debt indicators must be based on realistic macroeconomic assumptions and projections regarding the primary balance adjustment.

In general, to describe *solvency*, there are used in analyses indicators of the debt stock compared to the repayment capacity (the ratio between external debt and exports or public revenues)[2], and in order to capture *liquidity problems*, there are used debt service rates and indicators of gross financing needs (short-term external debt and/or external debt service related to foreign exchange reserves or exports)[3].

Political instability and tight monetary conditions in international financial markets exacerbate liquidity problems.

Liquidity problems are sometimes difficult to distinguish from solvency problems (Milea, 2019b). The lack of liquidity can lead to insolvency by inducing tensions in the exchange rate or by increasing interest rates.

Regarding the connection between gross external debt and economic growth, in emerging countries, the research of Reinhart and Rogoff (2010) shows that the thresholds of total gross external debt (public and private, which is almost exclusively expressed in foreign currency) are considerably lower compared to those of the public debt (whose internal component is expressed mostly in the national currency). So, debt in foreign currency is much more dangerous compared to that in national currency, mainly due to the currency risk, but also to the risks determined by contagion, and by the risk aversion of investors.

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[2] *The solvency condition is met if they have a stable or decreasing value.*

[3] *Gross financing needs include deficit and debt amortisation or primary deficit and debt service (IMF).*

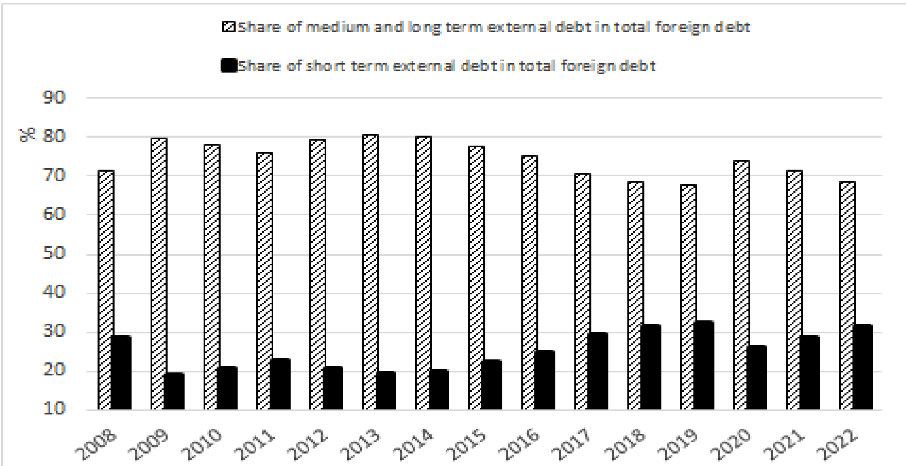
In conclusion, we can describe an "almost risk-free country" by several economic characteristics: a small ratio of external debt to the ability to pay (GDP or/and exports), low share of short-term debt in foreign exchange reserves, low value of external public debt in tax revenues, and an exchange rate of the national currency that is not excessively overvalued (Manasse P., Roubini N., 2005).

3. The foreign debt and the foreign debt crisis in Romania

From Figure 1, we can see that the economic-financial crisis of 2008 induced the decrease in the share of Romania's short-term external debt in the total external debt, compared to the previous years, between 2009 and 2015 being around 20%, as a result of the increase in the aversion to risk of creditors and investors. After the accrual from 2016-2019, the crisis caused by the occurrence of covid-19 has led to a further decrease of the indicator in 2020, on the background of the measures adopted by the authorities meant to reduce the activity, with the stated aim of limiting the spread of the virus, and implicitly of the aversion to risk of creditors and investors. But following the fast recovery of the economy, as early as 2021, the share of short-term external debt in the total external debt has increased in 2021 and 2022.

Figure 1

The evolution of the share of short-term external debt and medium and long-term external debt in the total external debt, in Romania, during 2006-2022 (%)



Source: author's calculations using NBR data

The level of the share of short-term external debt in the total external debt is associated with quite high risks because short-term debt must be paid in 1 year at the most. Among these risks, there are the rise in the volatility of the exchange rate of the national currency, the emphasis of the probability of a currency crisis and of the vulnerability to interest rate fluctuations.

In their analysis, Reinhart and Rogoff (2009) use two indicators that measure the vulnerability of the outburst of an external debt crisis, namely: foreign debt in GNP and foreign debt in exports. According to these economists, when the ratio of the external debt to GNP exceeds 30-35%, in an emerging market[4], the risk of debt service problems increases significantly.

Both indicators, together with the external debt to government revenues ratio measure the ability of an economy to pay its debts, i.e. its solvency.

We compute the indicators referred to by Reinhart and Rogoff (2009) to see what the situation of Romania's external debt is.

In order to calculate the Gross National Product (GNP), one starts from the level of GDP, the economic product made domestically in a country, and adds the income made abroad by the residents of that country, then subtracts the income taken out of that country by non-residents. GNP represents what actually belongs to a country from the economic activity measured at the national level by official statistics.

GNP can be higher or lower than GDP in absolute value and growth rate, depending on if the proportion of citizens living abroad from the country where this economic output is produced is higher or lower. However, the differences are not large, nor do they vary rapidly over time.

After aggregating the World Bank and IMF data, we find that Romania has a GNP/GDP ratio of 98.7%.

All indicators calculated in Figure 2 have had two moments of significant increase, showing that two shocks have been experienced during the analysed period. The first is the economic-financial crisis triggered in 2008, whose effects came to the surface between 2009 and 2012, and the other is the COVID-19 pandemic, which had a

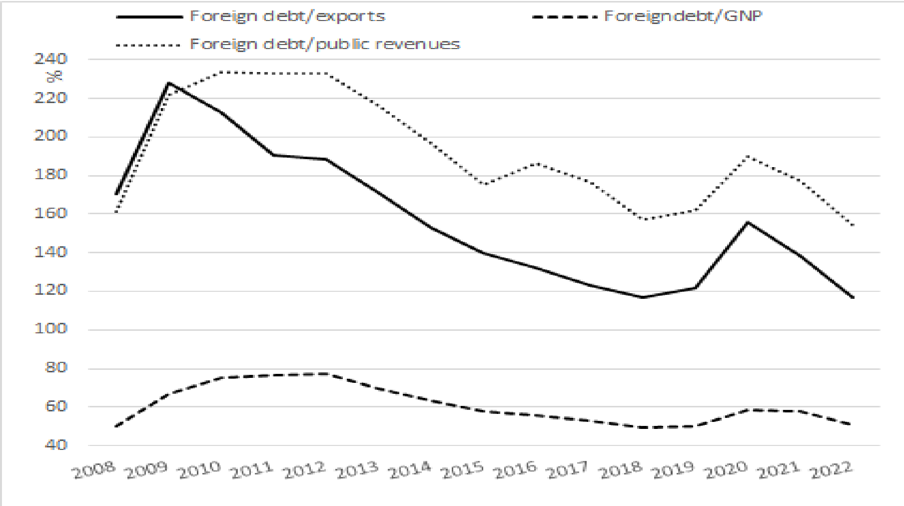
[4] *An emerging market is usually considered the economy of a country that is at a certain stage of development, has a regulated and efficient capital market, and the income of the population is increasing, but it is still below the average of the developed countries.*

significant impact in Romania, especially in 2020. However, in 2021 the indebtedness indicators of our country's economy have decreased.

According to Reinhart and Rogoff (2009), the values recorded by the indicators in Figure 2 show that our country is vulnerable to the emergence of an external debt crisis, as there is a risk of problems regarding debt repayment from the point of view of solvency.

Figure 2

The evolution of some debt indicators in Romania (%)



Source: author's calculations using data from NBR and the Ministry of Finance

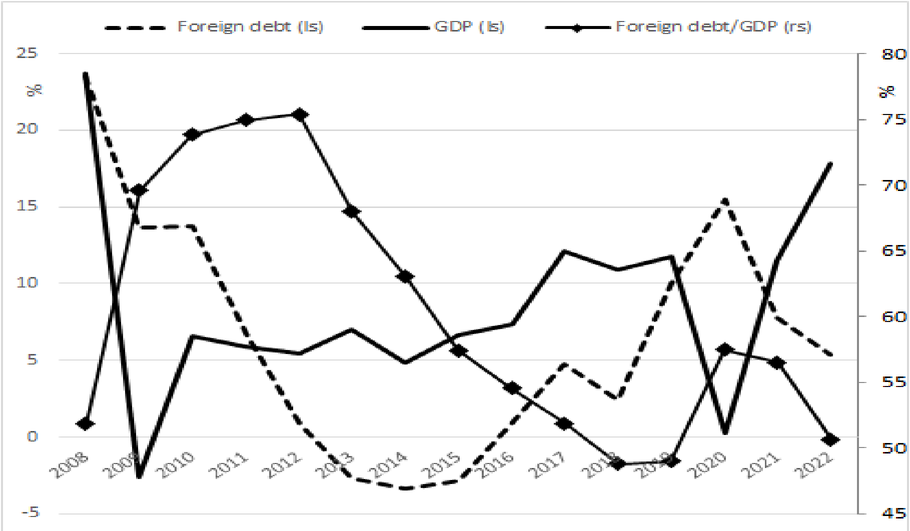
Debt burden is usually quantified using the ratio of external debt to GDP.

The analysis of Reinhart and Rogoff (2010) shows that there are two thresholds of external debt to GDP beyond which economic growth deteriorates. The first is 60% (the same as the criterion on the sustainability of public finances in the Maastricht Treaty) (above which economic growth falls by two percent), and the second is 90% (above which growth rates diminish by half).

Starting from the results of these economists' research and confronting them with the values recorded by the external debt in GDP in Romania, we find that, external debt exceeds the first threshold beyond which economic growth deteriorates, that of 60% in the period 2009-2014, as an effect of the external loans taken in the period 2004-2010 (see Figure 3).

Figure 3

The evolution of foreign debt and GDP in Romania (%)



Source: author's calculations using NBR data

NB. For foreign debt and GDP, the indicators show the annual growth rate

The ability to pay back the external debt of a country is also influenced by the external and budgetary imbalances, for any value of the debt, but also by the GDP growth rate, by the currency regime and by the deviation of the exchange rate from the equilibrium rate. Thus, the overvaluation of the national currency can cause external imbalance leading to the accumulation of debt. In addition, the overvaluation of the national currency can affect the volume of external debt in foreign currency (expressed in national currency), but also the budget if an important part of the debt is denominated in foreign currency, as the debt stock can increase significantly in real terms.

So, debt in foreign currency is more dangerous compared to that in national currency, mainly due to currency risk, but also to risks generated by investors' aversion to risk and by contagion.

According to Manasse and Roubini (2005), a relatively "safe" country from the point of view of indebtedness requires several economic premises: a level of total external debt in GDP below 49.7%; of short-term debt in reserves below 130%; of external public debt in fiscal revenues below 214%; and an exchange rate that is not excessively overvalued (overvaluation under 48%).

In Table 1, we have calculated the indicators used by Manasse and Roubini (2005) in order to assess the sustainability of the external debt in Romania. Thus, the external debt in GDP exceeds the maximum allowed threshold in almost all the years of the analysed period, the volatility of the exchange rate is small, the short-term debt in reserves, as well as the medium and long-term external public debt in fiscal revenues are below the corresponding thresholds.

Table 1

Indicators of indebtedness in Romania (%)

Year /Indicator	Total foreign debt /GDP	Short term debt/reserves	Public foreign debt/ fiscal revenues	Volatility of real exchange rate leu/euro
2008	51,8	78,5	35,1	7,3
2009	69,6	55,1	58,3	17,5
2010	75,2	60,3	73,1	-1,1
2011	76	68,7	79,4	1,0
2012	76,6	67,0	92,8	7,6
2013	68	59,1	107,8	-1,5
2014	63	58,7	112,9	3,5
2015	57,4	64,0	99,4	1,7
2016	54,7	67,9	104,5	2,0
2017	51,8	86,1	107,9	-1,2
2018	48,4	95,1	112,6	-1,3
2019	48,5	107,7	118,9	2,8
2020	57,5	89,0	183,2	3,1
2021	56,5	96,5	153,6	-0,6
2022	50,3	97,0	121,5	1,8

Source: author’s calculations using data from NBR and the Ministry of Finance

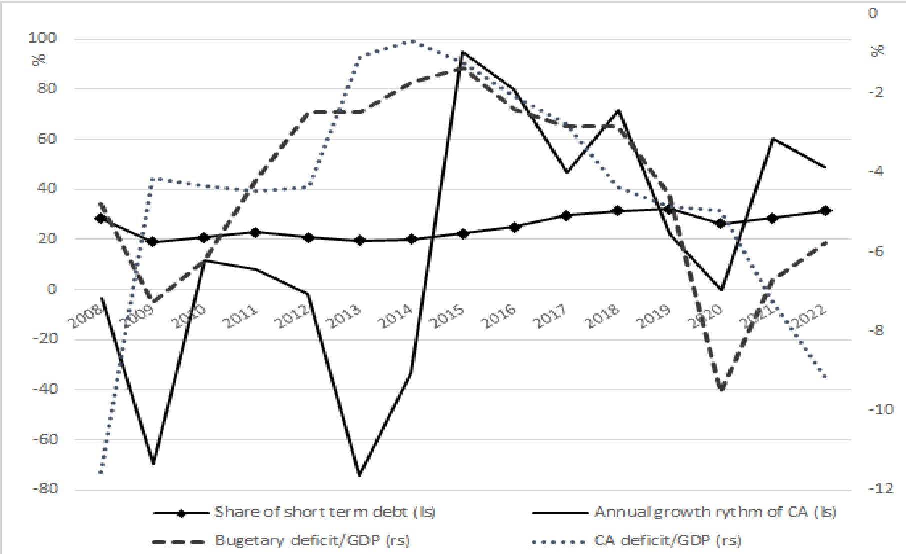
It can be said that the indebtedness situation in Romania is good from the point of view of liquidity, but it involves risks from the point of view of solvency (only the indicator of total external debt as a percentage of GDP is higher than the threshold from which - depending on the values of the other indicators - crises and external debt sustainability problems may occur). Short-term debt in international reserves is below the threshold due to the National Bank of Romania's measures to increase international reserves to values that give confidence to international creditors and investors.

Therefore, external debt risks in Romania are related to solvency, rather than liquidity.

We correlate the values of the indicators calculated according to the model of the economists Manasse and Roubini (2005) with other economic indicators that influence the sustainability of external debt. Thus, Romania has a large current account deficit that is on an almost continuously increasing trend; moderate share of short-term foreign debt in total foreign debt, with discontinuous trend of growth; periods marked by political uncertainty; exchange rate with managed floating; budget deficit with a worsening tendency in recent years (determined by expenses that cannot be diminished yet and by insufficiently collected revenues) (see Figure 4).

Figure 4

Indicators of foreign debt sustainability in Romania (%)



Source: author's calculations using NBR data

Romania has a chronic current account deficit, its values (absolute and relative - as a share of GDP) decrease only as a result of the occurrence of a crisis. For example, the share of the current account in GDP has suddenly diminished in 2009 to -4.2% as a result of the economic-financial crisis of 2008, in the previous period (2003-2008), this indicator constantly exceeding the threshold of -5% established at the international level, peaking with the value of -11.6%

in 2008. The covid-19 crisis not being a real economic crisis, but one induced by coercive measures with the aim of limiting the spread of a virus, did not have the effect of reducing the current account deficit of Romania. Thus, in the years following the forced restraint of the economic activity from 2020 (when there was a stagnation), the current account deficit increased significantly both in absolute value and as a share of GDP. The evolution of Romania's current account is determined by structural problems (imports greater than exports, a situation generated by the existence of a consumption not satisfied by domestic production, in an economy that develops by encouraging consumption).

The analysis of the above indicators regarding indebtedness shows that in 2022 we cannot talk about an external debt crisis in Romania, but there are some risk factors, especially regarding the solvency of the external debt. Among them are the evolution and the level of external and budgetary deficits, as well as the higher increase in external debt compared to GDP, which shows that the external debt taken is not used entirely for productive, profit-generating purposes, and it does not concur to economic growth.

As a result, in the absence of recovery measures, these internal economic imbalances may increase and problems of lack of liquidity or solvency of the external debt may arise, taking into account its rapid upward trend in recent years, which shows the fact that the Romanian economy needs foreign exchange infusion in order to work, and the sudden give up to external capitals is practically impossible.

4. Conclusions

From the analysis we notice that the evolution of short-term external debt in Romania is negatively influenced by the emergence of a crisis, thus it decreases or stagnates when a crisis breaks out, as a result of the increase in the risk aversion of investors.

The debt indicators calculated for Romania show a relatively good situation from the point of view of liquidity, and the existence of risks regarding the repayment of debts, from the point of view of solvency. When we correlate the analysed debt indicators with the economic indicators that show the vulnerabilities of the Romanian economy, we find the existence of additional risks in terms of the emergence of a foreign debt crisis in our country.

In Romania, the ability to pay back the external debt is negatively influenced especially by the external and budgetary imbalances, as well as by the faster increase of the external debt compared to GDP. The current account balance to GDP ratio, budget deficit to GDP ratio, and external debt to GDP ratio are key indicators that show the possibility of the external debt crisis in Romania.

The analysis shows that in 2022 there is no external debt crisis in Romania, but there are risks mainly in terms of the solvency of the external debt, especially if the external and budgetary imbalances increase, and if the fast growth trend of the external debt from the recent years continues.

Therefore, external debt risks in Romania are related to solvency, rather than liquidity.

References

1. NBR (2006-2023), Annual Reports, 2005-2022, National Bank of Romania, Bucharest.
2. NBR (2008-2023), Monthly Bulletins: December 2007, December 2008, December 2009, December 2010, December 2012, January 2013, January 2014, January 2015, December 2015, December 2016, December 2017, December 2018, January 2020, December 2020, December 2021, December 2022, September 2023, National Bank of Romania, Bucharest.
3. NBR (2018-2022), Balance of payments and the international investments position of Romania, Annual Reports 2017-2021, National Bank of Romania, Bucharest.
4. Manasse, P., Roubini, N. (2005), “Rules of Thumb” for Sovereign Debt Crises, IMF Working Paper WP/05/42.
5. Milea C. (2019a), Sustenabilitatea datoriei. Concepte şi definiţii, vol. II of the International Conference on Theoretical and Applied Economic Practices „Economic Growth in Conditions of Globalization: welfare and social inclusion”, The 14th Edition, Chişinău: INCE.
6. Milea C. (2019b), The Assessment of the Public Debt Sustainability, Journal of Financial and Monetary Economics, vol. 7/2019, pp. 111-121, http://icfm.ro/jfme.icfm.ro/JFME%202019.pdf
7. Milea C. (2021), Reflections on the consequences and risks of an economy’s indebtedness, Financial Studies, Vol. 25, Issue 2, pp. 50-63. http://fs.icfm.ro/Paper04.FS2.2021.pdf, http://icfm.ro/fs.icfm.ro/index.html
8. Ministry of Finance (2009-2022), Raport privind bugetul general consolidat în anii 2009-2022, available at

https://mfinante.gov.ro/domenii/bugetul-de-stat/informatii-executie-bugetara

9. Reinhart, C., Rogoff, K., (2009), This Time is Different: Eight Centuries of Financial Folly. Princeton University Press.
10. Reinhart, C., Rogoff, K., (2010), Growth in a Time of Debt, American Economic Review: Papers & Proceedings 100, http://www.aeaweb.org/articles.php?doi=10.1257/aer.100.2.573.